



A reconstruction of Edward Sang's canon of sines (K40/2,1877)

Denis Roegel

► To cite this version:

Denis Roegel. A reconstruction of Edward Sang's canon of sines (K40/2,1877). [Research Report] LORIA (Université de Lorraine, CNRS, INRIA). 2020. hal-03106595

HAL Id: hal-03106595

<https://inria.hal.science/hal-03106595>

Submitted on 11 Jan 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

A reconstruction of Edward Sang's canon of sines (K40/2,1877)

Denis Roegel

11 january 2021

This document is part of the LOCOMAT project:
<http://locomat.loria.fr>

1 Introduction

Edward Sang (1805–1890) was probably the greatest calculator of logarithms of the 19th century [4, 12, 13, 14, 26, 33]. Sang spent 40 years computing tables of logarithms and trigonometric functions, with the assistance from his daughters Flora (1838-1925) and Jane (1834-1878). The result fills about 50 manuscript volumes, plus a number of transfer duplicates, which are kept at Edinburgh University Library and at the National Library of Scotland, Edinburgh. I have reconstructed a number of these tables and an overview of the tables and reconstructions can be found in a separate guide [37].

Sang's purpose was in particular to provide fundamental tables, including for the decimal division of the quadrant. In 1890 [4, p. 189], he wrote that

In addition to the results being accurate to a degree far beyond what can ever be needed in practical matters, [the collection of computations] contains what no work of the kind has contained before, a complete and clear record of all the steps by which those results were reached. Thus we are enabled at once to verify, or if necessary, to correct the record, so making it a standard for all time.

For these reasons it is proposed that the entire collection be acquired by, and preserved in, some official library, so as to be accessible to all interested in such matters; so that future computers may be enabled to extend the work without the need of recomputing what has been already done; and also so that those extracts which are judged to be expedient may be published.

2 Sines

In the second half of the 1870s, Sang worked on the construction of a canon of sines [38]. This canon was built in three stages. First, Sang computed the sines at intervals of $25'$. Then he constructed a second table at intervals of $5'$. These two tables are found in volume K40. Finally, Sang constructed a canon of sines at $1'$ intervals (volumes K41 and K42) [47].

In his summary of tables drawn in July 1890 [70, 4], Sang describes the present volume K40/2:

This is the record of all the articulate steps in the calculation, to 33 places, of the sines of arcs differing by the 2000th part of the quadrant.

By the extraction of the square root and repeated bisections, the quadrant was divided into 80 parts, and the sines of the multiples of $01^\circ 25'$ were computed.

Thereafter the sines and cosines of $00^\circ 25'$ and of $01^\circ 25'$ were got by the direct resolution of the appropriate equations of the fifth degree, and were compared with those which had been got in computing the recurring functions of submultiples of π , the steps of which are copied into this record.

By help of 100 multiples of 2 ver $.25'$, and of 1000 multiples of 2 ver $.5'$, a table of sines of arcs differing by $25'$, and thereafter one of arcs differing by $5'$, were computed on the actual pages.

Although these have the appearance of being interpolations, they are truly independent computations, the use of the preceding work preventing mistakes, as well as the accumulation of the minute errors, due to the rejection of figures beyond the 33rd place.

The first part of volume K40 is reproduced separately [46].

Sang's table spans 200 pages, with 10 sines and differences per page. A comparison of Sang's table with my reconstruction shows that the deviations vary and may amount to 6 or more units of the 31st place. However, the sines rounded to 30 places are usually correct, and occasionally off by one unit of the 30th place.

Computation of Sines.								
260.	99996	91576	44789	71220	09433	09147	211	
9950	+	58600	23090	20969	84264	61242	280	
	-	6168	34833	00174	91225	71201	591	
9955	99997	50176	67879	92189	93697	70389	491	
	+	52431	88257	20794	93038	90040	689	
	-	6168	38067	26370	15604	27770	430	
9960	99998	02608	56137	12984	86736	60430	180	
	+	46263	50189	94424	77434	62270	259	
	-	6168	40921	02894	20933	29887	645	
9965	99998	48872	06327	07409	64171	22700	439	
	+	40035	09268	91530	56501	32382	614	
	-	6168	43394	29571	03754	94439	929	
9970	99998	88967	15595	98940	20672	55083	053	
	+	33926	65874	61959	52746	37942	685	
	-	6168	45487	06248	07717	13519	723	
9975	99999	22993	81470	60899	73418	93025	738	
	+	27758	20387	55711	45029	24422	962	
	-	6168	47199	32796	23582	95513	656	
9980	99999	50652	01858	16611	18448	17448	700	
	+	21589	73188	22915	21446	28909	306	
	-	6168	48531	09109	89238	61409	147	
9985	99999	72241	75046	39526	39894	46358	006	
	+	15421	24657	13805	32207	67500	159	
	-	6168	49482	35106	89699	96318	659	
9990	99999	87662	99703	53331	72102	13858	165	
	+	9252	75174	78698	42507	71181	500	
	-	6168	50053	10728	57117	56221	175	
9995	99999	96915	74878	32030	14609	85039	665	
	+	3084	25121	67969	85390	14960	325	
	-	6168	50243	35939	70780	29920	650	
30 December 1877.								

Figure 1: Excerpt from Sang's table of sines to 5'. (Courtesy Edinburgh University Library)

References

The following list covers the most important references¹ related to Sang’s table. Not all items of this list are mentioned in the text, and the sources which have not been seen are marked so. I have added notes about the contents of the articles in certain cases.

- [1] Marie Henri Andoyer. Fundamental trigonometrical and logarithmic tables. In Knott [26], pages 243–260.
- [2] Anonymous. Note about Edward Sang’s project of computing a nine-figure table of logarithms. *Nature*, 10:471, 1874. [Issue of 8 October 1874. This note was reproduced in [62].]
- [3] Anonymous. Correspondance. *Comptes rendus hebdomadaires des séances de l’Académie des sciences*, 80(22):1392–1393, janvier-juin 1875. [Minutes of the meeting of the 7 June 1875.]
- [4] Anonymous. Dr Edward Sang’s logarithmic, trigonometrical, and astronomical tables. *Proceedings of the Royal Society of Edinburgh*, 28:183–196, 1908. [Possibly by Cargill Gilston Knott, reprinted in [24]. Reprints [70].]
- [5] Raymond Clare Archibald. Tables of trigonometric functions in non-sexagesimal arguments. *Mathematical Tables and other Aids to Computation*, 1(2):33–44, April 1943.
- [6] Raymond Clare Archibald. Arithmetic, logarithmic, trigonometric, and astronomical tables, computed, 1848, 1869–89, by Edward Sang, and his daughters Jane Nicol Sang, Flora Chalmers Sang, and presented in 1907 to the Royal Society of Edinburgh, in custody for the British Nation. *Mathematical Tables and other Aids to Computation*, 1(9):368–370, 1945.
- [7] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres du deuxième million, ou plus exactement, depuis 1020000 à 2028000, avec les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1814. [also published in [9] together with [10] and [8]]
- [8] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres du troisième million, ou plus exactement, depuis 2028000 à 3036000, avec les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1816. [also published in [9] together with [10] and [7]]

¹**Note on the titles of the works:** Original titles come with many idiosyncrasies and features (line splitting, size, fonts, etc.) which can often not be reproduced in a list of references. It has therefore seemed pointless to capitalize works according to conventions which not only have no relation with the original work, but also do not restore the title entirely. In the following list of references, most title words (except in German) will therefore be left uncapitalized. The names of the authors have also been homogenized and initials expanded, as much as possible.

The reader should keep in mind that this list is not meant as a facsimile of the original works. The original style information could no doubt have been added as a note, but I have not done it here.

- [9] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres des 1^{er}, 2^e et 3^e million, ou plus exactement, depuis 1 à 3036000, avec les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1817. [each part was also published separately as [10], [7], and [8]]
- [10] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres du premier million, ou plus exactement, depuis 1 à 1020000, avec les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1817. [also published in [9] together with [7] and [8]]
- [11] Florian Cajori. *A history of mathematics*. New York: Macmillan and co., 1894.
- [12] Alexander Duncan Davidson Craik. Edward Sang (1805–1890): calculator extraordinary. *Newsletter of the British Society for the History of Mathematics*, 45:32–43, Spring 2002.
- [13] Alexander Duncan Davidson Craik. The logarithmic tables of Edward Sang and his daughters. *Historia Mathematica*, 30(1):47–84, February 2003.
- [14] Alexander Duncan Davidson Craik. Sang, Knott and Spence on logarithmic and other tables, 2016. [article written for a joint meeting of the James Clerk Maxwell Society and the British Society for the History of Mathematics in celebration of the 400th anniversary of the publication of John Napier’s *Mirifici Logarithmorum Canonis Descriptio*, 4th April 2014, Clerk Maxwell House, Edinburgh, <https://www.collectanea.eu/napier400memorial>]
- [15] Alan Fletcher, Jeffery Charles Percy Miller, Louis Rosenhead, and Leslie John Comrie. *An index of mathematical tables*. Oxford: Blackwell scientific publications Ltd., 1962. [2nd edition (1st in 1946), 2 volumes]
- [16] Laurent Fousse, Guillaume Hanrot, Vincent Lefèvre, Patrick Pélassier, and Paul Zimmermann. MPFR: A multiple-precision binary floating-point library with correct rounding. *ACM Transactions on Mathematical Software*, 33(2), 2007.
- [17] James Whitbread Lee Glaisher. On errors in Vlacq’s (often called Briggs’s or Neper’s) tables of ten-figure logarithms of numbers. *Monthly Notices of the Royal Astronomical Society*, 32(7):255–262, May 1872.
- [18] James Whitbread Lee Glaisher. Review of Edward Sang’s new table of seven-place logarithms. *The Messenger of Mathematics*, 1:77–80, 1872.
- [19] James Whitbread Lee Glaisher. On the progress to accuracy of logarithmic tables. *Monthly Notices of the Royal Astronomical Society*, 33:330–345, 1873.
- [20] James Whitbread Lee Glaisher. *Report of the committee on mathematical tables*. London: Taylor and Francis, 1873. [Also published as part of the “Report of the forty-third meeting of the British Association for the advancement of science,” London: John Murray, 1874. A review by R. Radau was published in the *Bulletin des sciences mathématiques et astronomiques*, volume 11, 1876, pp. 7–27]
- [21] G. Govi. Rapport sur l’utilité des tables de logarithmes à plus de sept décimales ; à propos d’un projet publié par M. Sang. *Atti della Reale Accademia di Scienze di Torino*, 8:157–170, 1873. [Reprinted in [60].]

- [22] Albert Hatzfeld. La division décimale du cercle. *Revue scientifique*, 48:655–659, 1891.
- [23] James Henderson. *Bibliotheca tabularum mathematicarum, being a descriptive catalogue of mathematical tables. Part I: Logarithmic tables (A. Logarithms of numbers)*, volume XIII of *Tracts for computers*. London: Cambridge University Press, 1926.
- [24] Ellice Martin Horsburgh, editor. *Modern instruments and methods of calculation: a handbook of the Napier tercentenary exhibition*. London: G. Bell and sons, 1914.
- [25] Cargill Gilston Knott. Edward Sang and his logarithmic calculations. [26], pages 261–268.
- [26] Cargill Gilston Knott, editor. *Napier Tercentenary Memorial Volume*. London: Longmans, Green and company, 1915.
- [27] Pierre Alexandre Francisque Lefort. Description des grandes tables logarithmiques et trigonométriques, calculées au bureau du cadastre, sous la direction de Prony, et exposition des méthodes et procédés mis en usage pour leur construction. *Annales de l’Observatoire impérial de Paris*, 4 (supplément):123–150, 1858.
- [28] Pierre Alexandre Francisque Lefort. Observations on Mr Sang’s remarks relative to the great logarithmic table compiled at the Bureau du Cadastre under the direction of M. Prony. *Proceedings of the Royal Society of Edinburgh, Session 1874–1875*, 8:563–581, 1875. [See [63] for Sang’s answer.]
- [29] Percy Alexander MacMahon. Sang’s seven-place logarithms. *Nature*, 97(2442):499, 1916. [Review of the 1915 reprint of Sang’s tables.]
- [30] Charles E. Manierre. The decimal system for time and arc for use in navigation. *Popular Astronomy*, 28:99–103, 1920. [Only on practical aspects of a switch to a decimal system, not historical ones.]
- [31] Jeffery Charles Percy Miller. The decimal subdivision of the degree. *The Mathematical Gazette*, 26(272):226–230, 1942. [On the available tables with a decimal subdivision of the degree, and in particular on Buckingham’s manual of gear design (1935), which contains 8-figure values of the trigonometric functions for such a subdivision.]
- [32] National Library of Scotland. Inventory Acc.10780: Papers and manuscripts of Edward Sang, 2003. [6 pages, <http://www.nls.uk/catalogues/online/cnmi/inventories/acc10780.pdf>]
- [33] David Bruce Peebles. Edward Sang. *Proceedings of the Royal Society of Edinburgh*, 21:xvii–xxxii, 1897.
- [34] Denis Roegel. A construction of Edward Sang’s projected table of nine-place logarithms to one million (1872). Technical report, LORIA, Nancy, 2010. [This construction is based on the specimen pages [60].]

- [35] Denis Roegel. A reconstruction of the tables of Thompson’s *Logarithmetica Britannica* (1952). Technical report, LORIA, Nancy, 2010. [This is a unpublished reconstruction of the tables in [75], not available for copyright reasons.]
- [36] Denis Roegel. The great logarithmic and trigonometric tables of the French Cadastre: a preliminary investigation. Technical report, LORIA, Nancy, 2010.
- [37] Denis Roegel. A guide to Edward Sang’s tables and to their reconstructions. Technical report, LORIA, Nancy, 2020.
- [38] Denis Roegel. Edward Sang’s computation of sines. Technical report, LORIA, Nancy, 2020.
- [39] Denis Roegel. Edward Sang’s computation of the logarithms of integers. Technical report, LORIA, Nancy, 2020.
- [40] Denis Roegel. Edward Sang’s steps for the construction of the logarithms of the primes (K1-K3). Technical report, LORIA, Nancy, 2020.
- [41] Denis Roegel. A reconstruction of Edward Sang’s table of logarithms of the first 10000 primes (K4). Technical report, LORIA, Nancy, 2020.
- [42] Denis Roegel. A reconstruction of Edward Sang’s table of logarithms of the first myriad of integers (K5). Technical report, LORIA, Nancy, 2020.
- [43] Denis Roegel. A reconstruction of Edward Sang’s table of logarithms of the second myriad of integers (K6). Technical report, LORIA, Nancy, 2020.
- [44] Denis Roegel. Introduction to Edward Sang’s table of logarithms to 15 places. Technical report, LORIA, Nancy, 2020. [This document is supplemented by 90 volumes of tables, as well as a volume gathering the entire table.]
- [45] Denis Roegel. A reconstruction of Edward Sang’s auxiliary table for logarithms of almost unitary values (K39,1884). Technical report, LORIA, Nancy, 2020.
- [46] Denis Roegel. A reconstruction of Edward Sang’s canon of sines (K40/1,1876). Technical report, LORIA, Nancy, 2020.
- [47] Denis Roegel. A reconstruction of Edward Sang’s canon of sines (K41-K42,1881). Technical report, LORIA, Nancy, 2020.
- [48] Denis Roegel. A reconstruction of Edward Sang’s table of logarithmic sines and tangents (K43,1888). Technical report, LORIA, Nancy, 2020.
- [49] Denis Roegel. A reconstruction of Edward Sang’s table of sines in degrees (K44,1879). Technical report, LORIA, Nancy, 2020.
- [50] Denis Roegel. A reconstruction of Edward Sang’s table of circular segments (K45,1879). Technical report, LORIA, Nancy, 2020.
- [51] Denis Roegel. A reconstruction of Edward Sang’s table of mean anomalies: volume A (K46,1880). Technical report, LORIA, Nancy, 2020.

- [52] Denis Roegel. A reconstruction of Edward Sang’s table of mean anomalies: volume B (K47,1880). Technical report, LORIA, Nancy, 2020.
- [53] Ralph Allen Sampson. Logarithmic, trigonometrical, and astronomical tables: forty-seven quarto volumes in manuscript (1848 to 1890). By Edward Sang, LL.D. In Knott [26], pages 236–237.
- [54] Edward Sang. *Solution of algebraic equations of all orders, whether involving one or more unknown quantities*. Edinburgh: William Tait, 1829.
- [55] Edward Sang. Short verbal notice of a simple and direct method of computing the logarithm of a number. *Proceedings of the Royal Society of Edinburgh*, 2:451, 1857. [This is a brief account (four lines) of a method using continued fractions to solve the exponential equation.]
- [56] Edward Sang. *Five place logarithms*. Edinburgh, 1859. [not seen]
- [57] Edward Sang. *A new table of seven-place logarithms of all numbers from 20 000 to 200 000*. London: Charles and Edwin Layton, 1871.
- [58] Edward Sang. Account of the new table of logarithms to 200000. *Transactions of the Royal Society of Edinburgh*, 26:521–528, 1872.
- [59] Edward Sang. On mechanical aids to calculation. *Journal of the Institute of Actuaries and Assurance Magazine*, 16:253–265, 1872. [The article was published in the July 1871 issue, but the volume is dated 1872.]
- [60] Edward Sang. Specimen pages of a table of the logarithms of all numbers up to one million...: shortened to nine figures from original calculations to fifteen places of decimals, 1872. [These specimen pages were reprinted in 1874 in a booklet which contained also a reprint of Govi’s report [21], a reprint of Sang’s article on Vlacq’s errors [61], and several other letters by eminent scientists supporting the publication of Sang’s table. The specimen pages were used to construct [34].]
- [61] Edward Sang. On last-place errors in Vlacq’s table of logarithms. *Proceedings of the Royal Society of Edinburgh*, 8:371–376, 1875. [First printed in the 1874 edition of [60].]
- [62] Edward Sang. Remarks on the great logarithmic and trigonometrical tables computed by the Bureau du Cadastre under the direction of M. Prony. *Proceedings of the Royal Society of Edinburgh, Session 1874–1875*, 8:421–436, 1875. [This article reproduces [2].]
- [63] Edward Sang. Reply to M. Lefort’s Observations (with a Postscript by M. Lefort). *Proceedings of the Royal Society of Edinburgh, Session 1874–1875*, 8:581–587, 1875. [This is a reply to [28].]
- [64] Edward Sang. On the construction of the canon of sines, for the decimal division of the quadrant. *Proceedings of the Royal Society of Edinburgh*, 9:343–349, 1878.

- [65] Edward Sang. On the precautions to be taken in recording and using the records of original computations. *Proceedings of the Royal Society of Edinburgh*, 9:349–352, 1878.
- [66] Edward Sang. Description of new astronomical tables for the computation of anomalies. *Proceedings of the Royal Society of Edinburgh*, 10(107):726–727, 1880.
- [67] Edward Sang. On the construction of the canon of logarithmic sines. *Proceedings of the Royal Society of Edinburgh*, 12:601–619, 1884.
- [68] Edward Sang. On the need for decimal subdivisions in astronomy and navigation, and on tables requisite therefor. *Proceedings of the Royal Society of Edinburgh*, 12:533–544, 1884.
- [69] Edward Sang. Notice of fundamental tables in trigonometry and astronomy, arranged according to the decimal division of the quadrant. *Proceedings of the Royal Society of Edinburgh*, 16:249–256, 1889.
- [70] Edward Sang. List of trigonometrical and astronomical calculations, in manuscript, 1890. [Dated July 1890. National Library of Scotland: Acc10780/10. Reprinted in [4].]
- [71] Edward Sang. On last-place errors in Vlacq. *Nature*, 42(1094):593, 1890.
- [72] Robert Shortrede. *Logarithmic tables, to seven places of decimals, containing logarithms to numbers from 1 to 120,000, numbers to logarithms from .0 to 1.00000, logarithmic sines and tangents to every second of the circle, with arguments in space and time, and new astronomical and geodesical tables*. Edinburgh: Adam and Charles Black, 1844.
- [73] Robert Shortrede. *Logarithmic tables, containing logarithms to numbers from 1 to 120,000, numbers to logarithms from .0 to 1.00000, to seven places of decimals; etc.* Edinburgh: Adam and Charles Black, 1849.
- [74] James Francis Tennant. Note on logarithmic tables. *Monthly Notices of the Royal Astronomical Society*, 33:563–565, 1873.
- [75] Alexander John Thompson. *Logarithmetica Britannica, being a standard table of logarithms to twenty decimal places of the numbers 10,000 to 100,000*. Cambridge: University press, 1952. [2 volumes, unpublished reconstruction by D. Roegel in 2010 [35].]
- [76] Shane F. Whelan. Edward Sang: actuary of the Millennium. *Newsletter of the Society of Actuaries in Ireland*, November 1999. [A slightly edited version was published in *The Actuary*, April 2000, page 27.]

c	Sine						
00 00'	.00000	00000	00000	00000	00000	00000	000
	+	78	53980	82651	93861	17294	12755 367
	—		4	84472	99841	78521	93061 780
00 05	.00078	53980	82651	93861	17294	12755	367
	+	78	53975	98178	94019	38772	19693 587
	—		9	68945	69798	84174	11014 639
00 10	.00157	07956	80830	87880	56066	32448	954
	+	78	53966	29233	24220	54598	08678 948
	—		14	53417	79986	45930	22771 354
00 15	.00235	61923	10064	12101	10664	41127	902
	+	78	53951	75815	44234	08667	85907 594
	—		19	37889	00519	96450	85174 386
00 20	.00314	15874	85879	56335	19332	27035	495
	+	78	53932	37926	43714	12217	00733 208
	—		24	22359	01514	73926	86676 436
00 25	.00392	69807	23806	00049	31549	27768	706
	+	78	53908	15567	42199	38290	14056 772
	—		29	06827	53086	23922	90679 872
00 30	.00471	23715	39373	42248	69839	41825	477
	+	78	53879	08739	89113	14367	23376 900
	—		33	91294	25350	01220	78421 316
00 35	.00549	77594	48113	31361	84206	65202	375
	+	78	53845	17445	63763	13146	44955 584
	—		38	75758	88421	71662	91287 584
00 40	.00628	31439	65558	95124	97353	10157	963
	+	78	53806	41686	75341	41483	53668 000
	—		43	60221	12417	13995	72449 576
00 45	.00706	85246	07245	70466	38836	63825	958
	+	78	53762	81465	62924	27487	81218 424
	—		48	44680	67452	21713	07699 816

c	Sine						
00 50'	.00785	39008	88711	33390	66324	45044	385
	+	78	53714	36784	95472	05774	608
	—		53	29137	23643	04899	65380 712
00 55	.00863	92723	25496	28862	72099	18562	989
	+	78	53661	07647	71829	00875	08137 896
	—		58	13590	51105	92074	35289 040
00 60	.00942	46384	33144	00691	72974	26700	887
	+	78	53602	94057	20723	08800	72848 856
	—		62	98040	19957	32033	66443 640
00 65	.01020	99987	27201	21414	81774	99549	750
	+	78	53539	96017	00765	76767	06405 216
	—		67	82486	00313	95695	03602 016
00 70	.01099	53527	23218	22180	58542	05954	954
	+	78	53472	13531	00451	81072	02803 200
	—		72	66927	62292	77940	22412 560
00 75	.01178	06999	36749	22632	39614	08758	154
	+	78	53399	46603	38159	03131	80390 640
	—		77	51364	76010	99458	63088 368
00 80	.01256	60398	83352	60791	42745	89148	798
	+	78	53321	95238	62148	03673	17302 272
	—		82	35797	11586	08590	62489 552
00 85	.01335	13720	78591	22939	46419	06451	076
	+	78	53239	59441	50561	95082	54812 720
	—		87	20224	39135	83170	84499 264
00 90	.01413	66960	38032	73501	41501	61263	790
	+	78	53152	39217	11426	11911	70313 456
	—		92	04646	28778	32371	48580 800
00 95	.01492	20112	77249	84927	53413	31577	250
	+	78	53060	34570	82647	79540	21732 656
	—		96	89062	50631	98545	56401 568

c	Sine							
01 00'	.01570	73173	11820	67575	32953	53309	911	
	+	78	52963	45508	32015	80994	65331 088	
	—		101	73472	74815	59070	16410 304	
01 05	.01649	26136	57328	99591	13948	18640	996	
	+	78	52861	72035	57200	21924	48920 784	
	—		106	57876	71448	28189	66253 616	
01 10	.01727	78998	29364	56791	35872	67561	777	
	+	78	52755	14158	85751	93734	82667 168	
	—		111	42274	10649	58858	92918 656	
01 15	.01806	31753	43523	42543	29607	50228	939	
	+	78	52643	71884	75102	34875	89748 512	
	—		116	26664	62539	44586	50487 824	
01 20	.01884	84397	15408	17645	64483	39977	455	
	+	78	52527	45220	12562	90289	39260 688	
	—		121	11047	97238	21277	75391 984	
01 25	.01963	36924	60628	30208	54772	79238	147	
	+	78	52406	34172	15324	69011	63868 704	
	—		125	95423	84866	69077	99047 968	
01 30	.02041	89330	94800	45533	23784	43106	863	
	+	78	52280	38748	30457	99933	64820 736	
	—		130	79791	95546	14215	57768 288	
01 35	.02120	41611	33548	75991	23718	07927	571	
	+	78	52149	58956	34911	85718	07052 448	
	—		135	64151	99398	30844	99826 368	
01 40	.02198	93760	92505	10903	09436	14980	022	
	+	78	52013	94804	35513	54873	07226 080	
	—		140	48503	66545	42889	89567 744	
01 45	.02277	45774	87309	46416	64309	22206	114	
	+	78	51873	46300	68968	11983	17658 336	
	—		145	32846	67110	25886	08449 088	

c	Sine							
01 50'	.02355	97648	33610	15384	76292	39864	442	
	+	78	51728	13454	01857	86097	09209 248	
	—		150	17180	71216	08824	52894 816	
01 55	.02434	49376	47064	17242	62389	49073	707	
	+	78	51577	96273	30641	77272	56314 432	
	—		155	01505	48986	75994	28856 480	
01 60	.02513	00954	43337	47884	39662	05388	126	
	+	78	51422	94767	81655	01278	27457 952	
	—		159	85820	70546	68825	42959 392	
01 65	.02591	52377	38105	29539	40940	32846	096	
	+	78	51263	08947	11108	32452	84498 560	
	—		164	70126	06020	87731	90127 392	
01 70	.02670	03640	47052	40647	73393	17344	649	
	+	78	51098	38821	05087	44720	94371 168	
	—		169	54421	25534	93954	37565 536	
01 75	.02748	54738	85873	45735	18114	11715	819	
	+	78	50928	84399	79552	50766	56805 632	
	—		174	38705	99215	11403	04994 880	
01 80	.02827	05667	70273	25287	68880	68521	426	
	+	78	50754	45693	80337	39363	51810 752	
	—		179	22979	97188	28500	41017 056	
01 85	.02905	56422	15967	05625	08244	20332	182	
	+	78	50575	22713	83149	10863	10793 696	
	—		184	07242	89582	00023	95503 520	
01 90	.02984	06997	38680	88774	19107	31125	872	
	+	78	50391	15470	93567	10839	15290 176	
	—		188	91494	46524	48948	87888 384	
01 95	.03062	57388	54151	82341	29946	46416	073	
	+	78	50202	23976	47042	61890	27401 792	
	—		193	75734	38144	68290	71257 024	

c	Sine							
02 00'	.03141	07590	78128	29383	91836	73817	854	
	+	78	50008	48242	08897	93599	56144 768	
	—		198	59962	34572	22947	92111 904	
02 05	.03219	57599	26370	38281	85436	29962	626	
	+	78	49809	88279	74325	70651	64032 864	
	—		203	44178	05937	51544	45707 072	
02 10	.03298	07409	14650	12607	56087	93995	478	
	+	78	49606	44101	68388	19107	18325 792	
	—		208	28381	22371	68272	26831 456	
02 15	.03376	57015	58751	80995	75195	12321	290	
	+	78	49398	15720	46016	50834	91494 336	
	—		213	12571	54006	64733	75934 336	
02 20	.03455	06413	74472	27012	26030	03815	630	
	+	78	49185	03148	92009	86101	15560 000	
	—		217	96748	70975	11784	20472 896	
02 25	.03533	55598	77621	19022	12131	19375	617	
	+	78	48967	06400	21034	74316	95087 104	
	—		222	80912	43410	61374	11372 768	
02 30	.03612	04565	84021	40056	86448	14462	713	
	+	78	48744	25487	77624	12942	83714 336	
	—		227	65062	41447	48391	54485 536	
02 35	.03690	53310	09509	17680	99390	98177	046	
	+	78	48516	60425	36176	64551	29228 800	
	—		232	49198	35220	92504	36930 048	
02 40	.03769	01826	69934	53857	63942	27405	858	
	+	78	48284	11227	00955	72046	92298 752	
	—		237	33319	94867	00002	48204 992	
02 45	.03847	50110	81161	54813	35989	19704	616	
	+	78	48046	77907	06088	72044	44093 760	
	—		242	17426	90522	65639	95956 896	

c	Sine							
02 50'	.03925	98157	59068	60902	08033	63798	375	
	+	78	47804	60480	15566	06404	48136 864	
	—		247	01518	92325	74477	16292 192	
02 55	.04004	45962	19548	76468	14438	11935	226	
	+	78	47557	58961	23240	31927	31844 672	
	—		251	85595	70415	03722	78519 040	
02 60	.04082	93519	78509	99708	46365	43779	905	
	+	78	47305	73365	52825	28204	53325 632	
	—		256	69656	94930	24575	84202 880	
02 65	.04161	40825	51875	52533	74569	97105	560	
	+	78	47049	03708	57895	03628	69122 752	
	—		261	53702	36012	04067	60427 648	
02 70	.04239	87874	55584	10428	78198	66228	291	
	+	78	46787	50006	21882	99561	08695 104	
	—		266	37731	63802	06903	47141 696	
02 75	.04318	34662	05590	32311	77759	74923	361	
	+	78	46521	12274	58080	92657	61553 408	
	—		271	21744	48442	97304	78481 792	
02 80	.04396	81183	17864	90392	70417	36476	793	
	+	78	46249	90530	09637	95352	83071 616	
	—		276	05740	60078	40850	57957 376	
02 85	.04475	27433	08395	00030	65770	19548	445	
	+	78	45973	84789	49559	54502	25114 240	
	—		280	89719	68853	06319	27381 440	
02 90	.04553	73406	93184	49590	20272	44662	687	
	+	78	45692	95069	80706	48182	97732 800	
	—		285	73681	44912	67530	29437 888	
02 95	.04632	19099	88254	30296	68455	42395	485	
	+	78	45407	21388	35793	80652	68294 912	
	—		290	57625	58404	05185	63766 976	

c	Sine							
03 00'	.04710	64507	09642	66090	49108	10690	371	
	+	78	45116	63762	77389	75467	04527 936	
	—		295	41551	79475	08711	36459 264	
03 05	.04789	09623	73405	43480	24575	15218	293	
	+	78	44821	22210	97914	66755	68068 672	
	—		300	25459	78274	78099	02843 456	
03 10	.04867	54444	95616	41394	91330	83286	946	
	+	78	44520	96751	19639	88656	65225 216	
	—		305	09349	24953	25747	03451 392	
03 15	.04945	98965	92367	61034	79987	48512	193	
	+	78	44215	87401	94686	62909	61773 824	
	—		309	93219	89661	78301	93051 776	
03 20	.05024	43181	79769	55721	42897	10286	000	
	+	78	43905	94182	05024	84607	68722 048	
	—		314	77071	42552	78499	62636 160	
03 25	.05102	87087	73951	60746	27504	79008	081	
	+	78	43591	17110	62472	06108	06085 888	
	—		319	60903	53779	87006	54242 560	
03 30	.05181	30678	91062	23218	33612	85093	928	
	+	78	43271	56207	08692	19101	51843 328	
	—		324	44715	93497	84260	68505 216	
03 35	.05259	73950	47269	31910	52714	36937	272	
	+	78	42947	11491	15194	34840	83338 112	
	—		329	28508	31862	72312	64817 664	
03 40	.05338	16897	58760	47104	87555	20275	363	
	+	78	42617	82982	83331	62528	18520 448	
	—		334	12280	39031	76666	53991 040	
03 45	.05416	59515	41743	30436	50083	38795	841	
	+	78	42283	70702	44299	85861	64529 408	
	—		338	96031	85163	48120	83301 376	

c	Sine							
03 50'	.05495	01799	12445	74736	35945	03325	254	
	+	78	41944	74670	59136	37740	81228 032	
	—		343	79762	40417	64609	13802 880	
03 55	.05573	43743	87116	33872	73685	84553	273	
	+	78	41600	94908	18718	73131	67425 152	
	—		348	63471	74955	33040	89804 160	
03 60	.05651	85344	82024	52591	46817	51978	420	
	+	78	41252	31436	43763	40090	77620 992	
	—		353	47159	58938	91142	00384 832	
03 65	.05730	26597	13460	96354	86908	29599	430	
	+	78	40898	84276	84824	48948	77236 160	
	—		358	30825	62532	09295	32844 224	
03 70	.05808	67495	97737	81179	35857	06835	576	
	+	78	40540	53451	22292	39653	44391 936	
	—		363	14469	55899	92381	17967 296	
03 75	.05887	08036	51189	03471	75510	51227	543	
	+	78	40177	38981	66392	47272	26424 640	
	—		367	98091	09208	81617	66993 280	
03 80	.05965	48213	90170	69864	22782	77652	171	
	+	78	39809	40890	57183	65654	59431 360	
	—		372	81689	92626	56401	00174 912	
03 85	.06043	88023	31061	27047	88437	37083	499	
	+	78	39436	59200	64557	09253	59256 448	
	—		377	65265	76322	36145	66813 888	
03 90	.06122	27459	90261	91604	97690	96339	966	
	+	78	39058	93934	88234	73107	92442 560	
	—		382	48818	30466	82124	56659 392	
03 95	.06200	66518	84196	79839	70798	88782	556	
	+	78	38676	45116	57767	90983	35783 168	
	—		387	32347	25231	99309	02556 928	

c	Sine							
04 00'	.06279	05195	29313	37607	61782	24565	714	
	+	78	38289	12769	32535	91674	33226 240	
	—		392	15852	30791	38208	74229 952	
04 05	.06357	43484	42082	70143	53456	57791	923	
	+	78	37896	96917	01744	53465	58996 288	
	—		396	99333	17319	96711	63089 216	
04 10	.06435	81381	38999	71888	06922	16788	201	
	+	78	37499	97583	84424	56753	95907 072	
	—		401	82789	54994	21923	57945 792	
04 15	.06514	18881	36583	56312	63676	12695	318	
	+	78	37098	14794	29430	34830	37961 280	
	—		406	66221	13992	12008	11523 136	
04 20	.06592	55979	51377	85742	98506	50656	591	
	+	78	36691	48573	15438	22822	26438 144	
	—		411	49627	64493	18025	97650 112	
04 25	.06670	92670	99951	01181	21328	77094	697	
	+	78	36279	98945	50945	04796	28788 032	
	—		416	33008	76678	45774	59020 416	
04 30	.06749	28950	98896	52126	26125	05882	750	
	+	78	35863	65936	74266	59021	69767 616	
	—		421	16364	20730	57627	45412 544	
04 35	.06827	64814	64833	26392	85146	75650	347	
	+	78	35442	49572	53536	01394	24355 072	
	—		425	99693	66833	74373	42244 224	
04 40	.06906	00257	14405	79928	86541	00005	439	
	+	78	35016	49878	86702	27020	82110 848	
	—		430	82996	85173	77055	89360 576	
04 45	.06984	35273	64284	66631	13561	82116	285	
	+	78	34585	66882	01528	49964	92750 272	
	—		435	66273	45938	08811	89935 488	

c	Sine							
04 50'	.07062	69859	31166	68159	63526	74866	541	
	+	78	34150	00608	55590	41153	02814 784	
	—		440	49523	19315	76711	09371 520	
04 55	.07141	04009	31775	23750	04679	77681	320	
	+	78	33709	51085	36274	64441	93443 264	
	—		445	32745	75497	53594	64092 416	
04 60	.07219	37718	82860	60024	69121	71124	576	
	+	78	33264	18339	60777	10847	29350 848	
	—		450	15940	84675	79914	00105 472	
04 65	.07297	70983	01200	20801	79969	00475	460	
	+	78	32814	02398	76101	30933	29245 376	
	—		454	99108	17044	65569	61228 416	
04 70	.07376	03797	03598	96903	10902	29720	862	
	+	78	32359	03290	59056	65363	68016 960	
	—		459	82247	42799	91749	46860 736	
04 75	.07454	36156	06889	55959	76265	97737	773	
	+	78	31899	21043	16256	73614	21156 224	
	—		464	65358	32139	12767	59191 296	
04 80	.07532	68055	27932	72216	49880	18893	989	
	+	78	31434	55684	84117	60846	61964 928	
	—		469	48440	55261	57902	39727 232	
04 85	.07610	99489	83617	56334	10726	80858	922	
	+	78	30965	07244	28856	02944	22237 696	
	—		474	31493	82368	33234	95025 728	
04 90	.07689	30454	90861	85190	13671	03096	659	
	+	78	30490	75750	46487	69709	27211 968	
	—		479	14517	83662	23487	11527 040	
04 95	.07767	60945	66612	31677	83380	30308	594	
	+	78	30011	61232	62825	46222	15684 928	
	—		483	97512	29347	93859	59360 576	

c	Sine						
05 00'	.07845	90957	27844	94503	29602	45993	515
	+	78	29527	63720	33477	52362	56324
	—		488	80476	89631	91869	85022
05 05	.07924	20484	91565	27980	81965	02317	876
	+	78	29038	83243	43845	60492	71301
	—		493	63411	34722	49189	92808
05 10	.08002	49523	74808	71826	42457	73619	398
	+	78	28545	19832	09123	11302	78493
	—		498	46315	34829	83484	14879
05 15	.08080	78068	94640	80949	53760	52112	658
	+	78	28046	73516	74293	27818	63613
	—		503	29188	60166	00246	69864
05 20	.08159	06115	68157	55242	81579	15726	406
	+	78	27543	44328	14127	27571	93749
	—		508	12030	80944	94639	09869
05 25	.08237	33659	12485	69370	09151	09475	733
	+	78	27035	32297	33182	32932	83879
	—		512	94841	67382	53327	55791
05 30	.08315	60694	44783	02552	42083	93355	156
	+	78	26522	37455	65799	79605	28088
	—		517	77620	89696	56320	20813
05 35	.08393	87216	82238	68352	21689	21443	219
	+	78	26004	59834	76103	23285	07274
	—		522	60368	18106	78804	21981
05 40	.08472	13221	42073	44455	44974	28717	964
	+	78	25481	99466	57996	44480	85293
	—		527	43083	22834	92982	79736
05 45	.08550	38703	41540	02451	89455	14011	171
	+	78	24954	56383	35161	51498	05557
	—		532	25765	74104	69912	05291

c	Sine							
05 50'	.08628	63657	97923	37613	40953	19568	198	
	+	78	24422	30617	61056	81586	00265 216	
	—		537	08415	42141	81337	75750 784	
05 55	.08706	88080	28540	98670	22539	19833	432	
	+	78	23885	22202	18915	00248	24514 432	
	—		541	91031	97174	01531	96839 040	
05 60	.08785	11965	50743	17585	22787	44347	930	
	+	78	23343	31170	21740	98716	27675 392	
	—		546	73615	09431	09129	53146 496	
05 65	.08863	35308	81913	39326	21503	72023	303	
	+	78	22796	57555	12309	89586	74528 896	
	—		551	56164	49144	88964	45761 664	
05 70	.08941	58105	39468	51636	11090	46552	179	
	+	78	22245	01390	63165	00622	28767 232	
	—		556	38679	86549	33906	17188 992	
05 75	.09019	80350	40859	14801	11712	75319	480	
	+	78	21688	62710	76615	66716	11578 240	
	—		561	21160	91880	46695	63432 576	
05 80	.09098	02039	03569	91416	78428	86897	668	
	+	78	21127	41549	84735	20020	48145 664	
	—		566	03607	35376	41781	33130 752	
05 85	.09176	23166	45119	76151	98449	35043	382	
	+	78	20561	37942	49358	78239	15014 912	
	—		570	86018	87277	47155	13637 632	
05 90	.09254	43727	83062	25510	76688	50058	296	
	+	78	19990	51923	62081	31084	01377 280	
	—		575	68395	17826	06188	03927 296	
05 95	.09332	63718	34985	87592	07772	51435	522	
	+	78	19414	83528	44255	24895	97449 984	
	—		580	50735	97266	79465	74212 480	

c	Sine							
06 00'	.09410	83133	18514	31847	32668	48885	519	
	+	78	18834	32792	46988	45430	23237 504	
	—		585	33040	95846	46624	12168 192	
06 05	.09489	01967	51306	78835	78098	72123	068	
	+	78	18248	99751	51141	98806	11069 312	
	—		590	15309	83814	08184	55641 088	
06 10	.09567	20216	51058	29977	76904	83192	314	
	+	78	17658	84441	67327	90621	55428 224	
	—		594	97542	31420	87389	11728 768	
06 15	.09645	37875	35499	97305	67526	38620	573	
	+	78	17063	86899	35907	03232	43699 456	
	—		599	79738	08920	32035	62130 816	
06 20	.09723	54939	22399	33212	70758	82320	028	
	+	78	16464	07161	26986	71196	81568 640	
	—		604	61896	86568	16312	54638 592	
06 25	.09801	71403	29560	60199	41955	63888	668	
	+	78	15859	45264	40418	54884	26930 048	
	—		609	44018	34622	42633	80664 704	
06 30	.09879	87262	74825	00617	96839	90818	738	
	+	78	15250	01246	05796	12250	46265 344	
	—		614	26102	23343	43473	38693 504	
06 35	.09958	02512	76071	06414	09090	37084	009	
	+	78	14635	75143	82452	68777	07571 840	
	—		619	08148	22993	83199	83540 992	
06 40	.10036	17148	51214	88866	77867	44655	873	
	+	78	14016	66995	59458	85577	24030 848	
	—		623	90156	03838	59910	61308 032	
06 45	.10114	31165	18210	48325	63444	68686	735	
	+	78	13392	76839	55620	25666	62722 816	
	—		628	72125	36145	07266	29919 872	

c	Sine							
06 50'	.10192	44557	95050	03945	89111	31409	483	
	+	78	12764	04714	19475	18400	32802 944	
	—		633	54055	90182	96324	65129 344	
06 55	.10270	57321	99764	23421	07511	64212	457	
	+	78	12130	50658	29292	22075	67673 600	
	—		638	35947	36224	37374	51884 160	
06 60	.10348	69452	50422	52713	29587	31886	044	
	+	78	11492	14710	93067	84701	15789 440	
	—		643	17799	44543	81769	60926 720	
06 65	.10426	80944	65133	45781	14288	47675	463	
	+	78	10848	96911	48524	02931	54862 720	
	—		647	99611	85418	23762	10536 064	
06 70	.10504	91793	62044	94305	17220	02538	282	
	+	78	10200	97299	63105	79169	44326 656	
	—		652	81384	29127	02336	13274 112	
06 75	.10583	01994	59344	57410	96389	46864	928	
	+	78	09548	15915	33978	76833	31052 544	
	—		657	63116	45952	03041	07648 000	
06 80	.10661	11542	75259	91389	73222	77917	449	
	+	78	08890	52798	88026	73792	23404 544	
	—		662	44808	06177	59824	74550 144	
06 85	.10739	20433	28058	79416	47015	01321	979	
	+	78	08228	07990	81849	13967	48854 400	
	—		667	26458	80090	56866	38387 840	
06 90	.10817	28661	36049	61265	60982	50176	434	
	+	78	07560	81532	01758	57101	10466 560	
	—		672	08068	37980	30409	52770 432	
06 95	.10895	36222	17581	63024	18083	60642	917	
	+	78	06888	73463	63778	26691	57696 128	
	—		676	89636	50138	70594	70647 168	

c	Sine							
07 00'	.10973	43110	91045	26802	44775	18339	036	
	+	78	06211	83827	13639	56096	87048 960	
	—		681	71162	86860	23291	98788 608	
07 05	.11051	49322	74872	40442	00872	05388	009	
	+	78	05530	12664	26779	32804	88260 352	
	—		686	52647	18441	91933	36490 112	
07 10	.11129	54852	87536	67221	33676	93648	402	
	+	78	04843	60017	08337	40871	51770 240	
	—		691	34089	15183	39344	98384 768	
07 15	.11207	59696	47553	75558	74548	45418	593	
	+	78	04152	25927	93154	01526	53385 472	
	—		696	15488	47386	89579	21264 384	
07 20	.11285	63848	73481	68712	76074	98804	060	
	+	78	03456	10439	45767	11947	32121 088	
	—		700	96844	85357	29746	54773 888	
07 25	.11363	67304	83921	14479	88022	30925	184	
	+	78	02755	13594	60409	82200	77347 200	
	—		705	78157	99402	11847	35894 656	
07 30	.11441	70059	97515	74889	70223	08272	327	
	+	78	02049	35436	61007	70353	41452 544	
	—		710	59427	59831	54603	47069 952	
07 35	.11519	72109	32952	35897	40576	49724	945	
	+	78	01338	76009	01176	15749	94382 592	
	—		715	40653	36958	45289	57897 472	
07 40	.11597	73448	08961	37073	56326	44107	540	
	+	78	00623	35355	64217	70460	36485 120	
	—		720	21835	01098	41564	50237 312	
07 45	.11675	74071	44317	01291	26786	80592	651	
	+	77	99903	13520	63119	28895	86247 808	
	—		725	02972	22569	73302	26655 616	

c	Sine							
07 50'	.11753	73974	57837	64410	55682	66840	484	
	+	77	99178	10548	40549	55593	59592 192	
	—		729	84064	71693	44423	02068 224	
07 55	.11831	73152	68386	04960	11276	26432	700	
	+	77	98448	26483	68856	11170	57523 968	
	—		734	65112	18793	34723	78485 120	
07 60	.11909	71600	94869	73816	22446	83956	607	
	+	77	97713	61371	50062	76446	79038 848	
	—		739	46114	34196	01709	02730 240	
07 65	.11987	69314	56241	23878	98893	62995	435	
	+	77	96974	15257	15866	74737	76308 608	
	—		744	27070	88230	82421	07042 304	
07 70	.12065	66288	71498	39745	73631	39304	029	
	+	77	96229	88186	27635	92316	69266 304	
	—		749	07981	51229	95270	32418 432	
07 75	.12143	62518	59684	67381	65948	08570	304	
	+	77	95480	80204	76405	97046	36847 872	
	—		753	88845	93528	41865	34614 400	
07 80	.12221	57999	39889	43787	62994	45418	284	
	+	77	94726	91358	82877	55181	02233 472	
	—		758	69663	85464	08842	72666 368	
07 85	.12299	52726	31248	26665	18175	47651	720	
	+	77	93968	21694	97413	46338	29567 104	
	—		763	50434	97377	69696	79837 184	
07 90	.12377	46694	52943	24078	64513	77218	752	
	+	77	93204	71260	00035	76641	49729 920	
	—		768	31158	99612	86609	16862 080	
07 95	.12455	39899	24203	24114	41155	26948	690	
	+	77	92436	40101	00422	90032	32867 840	
	—		773	11835	62516	12278	07392 512	

c	Sine						
08 00'	.12533	32335	64304	24537	31187	59816	551
	+	77	91663	28265	37906	77754	25475 328
	—		777	92464	56436	91747	55514 496
08 05	.12611	23998	92569	62444	08941	85291	878
	+	77	90885	35800	81469	86006	69960 832
	—		782	73045	51727	64236	45238 272
08 10	.12689	14884	28370	43913	94948	55252	727
	+	77	90102	62755	29742	21770	24722 560
	—		787	53578	18743	64967	21834 624
08 15	.12767	04986	91125	73656	16718	79975	256
	+	77	89315	09177	10998	56803	02887 936
	—		792	34062	27843	26994	54922 880
08 20	.12844	94302	00302	84654	73521	82863	276
	+	77	88522	75114	83155	29808	47965 056
	—		797	14497	49387	83033	83176 448
08 25	.12922	82824	75417	67810	03330	30828	310
	+	77	87725	60617	33767	46774	64788 608
	—		801	94883	53741	67289	40550 272
08 30	.13000	70550	36035	01577	50104	95616	853
	+	77	86923	65733	80025	79485	24238 336
	—		806	75220	11272	17282	63908 096
08 35	.13078	57474	01768	81603	29590	19855	206
	+	77	86116	90513	68753	62202	60330 240
	—		811	55506	92349	75679	81942 144
08 40	.13156	43590	92282	50356	91792	80185	526
	+	77	85305	35006	76403	86522	78388 096
	—		816	35743	67347	92119	85266 816
08 45	.13234	28896	27289	26760	78315	58573	624
	+	77	84488	99263	09055	94402	93121 280
	—		821	15930	06643	25041	77579 776

c	Sine							
08 50'	.13312	13385	26552	35816	72718	51694	792	
	+	77	83667	83333	02412	69361	15541 504	
	—		825	96065	80615	43512	07769 984	
08 55	.13389	97053	09885	38229	42079	67236	410	
	+	77	82841	87267	21797	25849	07771 520	
	—		830	76150	59647	29051	82874 240	
08 60	.13467	79894	97152	60026	67928	75007	858	
	+	77	82011	11116	62149	96797	24897 280	
	—		835	56184	14124	77463	61745 408	
08 65	.13545	61906	08269	22176	64725	99905	173	
	+	77	81175	54932	48025	19333	63151 872	
	—		840	36166	14437	00658	29349 888	
08 70	.13623	43081	63201	70201	84059	63057	024	
	+	77	80335	18766	33588	18675	33801 984	
	—		845	16096	30976	28481	51553 152	
08 75	.13701	23416	81968	03790	02734	96858	969	
	+	77	79490	02670	02611	90193	82248 832	
	—		849	95974	34138	10540	10303 104	
08 80	.13779	02906	84638	06401	92928	79107	876	
	+	77	78640	06695	68473	79653	71945 728	
	—		854	75799	94321	18028	19078 400	
08 85	.13856	81546	91333	74875	72582	51053	621	
	+	77	77785	30895	74152	61625	52867 328	
	—		859	55572	81927	45553	18516 480	
08 90	.13934	59332	22229	49028	34208	03920	842	
	+	77	76925	75322	92225	16072	34350 848	
	—		864	35292	67362	12961	52066 304	
08 95	.14012	36257	97552	41253	50280	38271	724	
	+	77	76061	40030	24863	03110	82284 544	
	—		869	14959	21033	67164	21609 856	

c	Sine							
09 00'	.14090	12319	37582	66116	53391	20556	306	
	+	77	75192	25071	03829	35946	60674 688	
	—		873	94572	13353	83962	22878 208	
09 05	.14167	87511	62653	69945	89337	81230	920	
	+	77	74318	30498	90475	51984	37796 480	
	—		878	74131	14737	69871	60604 800	
09 10	.14245	61829	93152	60421	41322	19027	498	
	+	77	73439	56367	75737	82112	77191 680	
	—		883	53635	95603	63948	43262 336	
09 15	.14323	35269	49520	36159	23434	96219	179	
	+	77	72556	02731	80134	18164	33929 344	
	—		888	33086	26373	39613	57293 952	
09 20	.14401	07825	52252	16293	41599	30148	475	
	+	77	71667	69645	53760	78550	76635 392	
	—		893	12481	77472	06477	20717 440	
09 25	.14478	79493	21897	70054	20150	06783	820	
	+	77	70774	57163	76288	72073	55917 952	
	—		897	91822	19328	12163	15993 472	
09 30	.14556	50267	79061	46342	92223	62701	767	
	+	77	69876	65341	56960	59910	39924 480	
	—		902	71107	22373	44133	02039 168	
09 35	.14634	20144	44403	03303	52134	02626	342	
	+	77	68973	94234	34587	15777	37885 312	
	—		907	50336	57043	31510	05284 864	
09 40	.14711	89118	38637	37890	67911	40511	599	
	+	77	68066	43897	77543	84267	32600 448	
	—		912	29509	93776	46902	89649 152	
09 45	.14789	57184	82535	15434	52178	73112	028	
	+	77	67154	14387	83767	37364	42951 296	
	—		917	08627	03015	08229	05329 664	

c	Sine							
09 50'	.14867	24338	96922	99201	89543	16063	301	
	+	77	66237	05760	80752	29135	37621 632	
	—		921	87687	55204	80538	16294 272	
09 55	.14944	90576	02683	79954	18678	53684	982	
	+	77	65315	18073	25547	48597	21327 360	
	—		926	66691	20794	77835	06356 352	
09 60	.15022	55891	20757	05501	67275	75012	373	
	+	77	64388	51382	04752	70762	14971 008	
	—		931	45637	70237	64902	63726 464	
09 65	.15100	20279	72139	10254	38037	89983	385	
	+	77	63457	05744	34515	05859	51244 544	
	—		936	24526	73989	59124	43926 912	
09 70	.15177	83736	77883	44769	43897	41227	854	
	+	77	62520	81217	60525	46735	07317 632	
	—		941	03358	02510	32307	10954 240	
09 75	.15255	46257	59101	05294	90632	48545	565	
	+	77	61579	77859	58015	14427	96363 392	
	—		945	82131	26263	12502	56582 656	
09 80	.15333	07837	36960	63310	05060	44908	927	
	+	77	60633	95728	31752	01925	39780 736	
	—		950	60846	15714	85829	97684 608	
09 85	.15410	68471	32688	95062	06985	84689	719	
	+	77	59683	34882	16037	16095	42096 128	
	—		955	39502	41335	98297	51478 144	
09 90	.15488	28154	67571	11099	23081	26785	819	
	+	77	58727	95379	74701	17797	90617 984	
	—		960	18099	73600	57623	88554 496	
09 95	.15565	86882	62950	85800	40879	17403	825	
	+	77	57767	77280	01100	60174	02063 488	
	—		964	96637	82986	35059	63617 792	

c	Sine							
10 00'	.15643	44650	40230	86901	01053	19467	250	
	+	77	56802	80642	18114	25114	696	
	—		969	75116	39974	67208	23773 568	
10 05	.15721	01453	20873	05015	26167	57912	922	
	+	77	55833	05525	78139	57906	14672 128	
	—		974	53535	15050	57846	94306 944	
10 10	.15798	57286	26398	83154	84073	72585	129	
	+	77	54858	51990	63089	00059	20365 184	
	—		979	31893	78702	79747	41789 312	
10 15	.15876	12144	78389	46243	84132	92950	294	
	+	77	53879	20096	84386	20311	78575 872	
	—		984	10192	01423	76496	14438 912	
10 20	.15953	66023	98486	30630	04444	71526	083	
	+	77	52895	09904	82962	43815	64136 960	
	—		988	88429	53709	64314	59599 104	
10 25	.16031	18919	08391	13592	48260	35663	044	
	+	77	51906	21475	29252	79501	04537 856	
	—		993	66606	06060	33879	18235 904	
10 30	.16108	70825	29866	42845	27761	40200	983	
	+	77	50912	54869	23192	45621	86301 952	
	—		998	44721	28979	52140	96331 776	
10 35	.16186	21737	84735	66037	73383	26502	970	
	+	77	49914	10147	94212	93480	89970 176	
	—		1003	22774	92974	64145	13075 456	
10 40	.16263	71651	94883	60250	66864	16473	208	
	+	77	48910	87373	01238	29335	76894 720	
	—		1008	00766	68556	94850	25723 392	
10 45	.16341	20562	82256	61488	96199	93367	829	
	+	77	47902	86606	32681	34485	51171 328	
	—		1012	78696	26241	50947	31028 992	

c	Sine							
10 50'	.16418	68465	68862	94170	30685	44539	149	
	+	77	46890	07910	06439	83538	20142	336
	—		1017	56563	36547	22678	43123	968
10 55	.16496	15355	76773	00610	14223	64681	382	
	+	77	45872	51346	69892	60859	77018	368
	—		1022	34367	69996	85655	47741	440
10 60	.16573	61228	28119	70502	75083	41699	761	
	+	77	44850	16978	99895	75204	29276	928
	—		1027	12108	97117	02678	32664	064
10 65	.16651	06078	45098	70398	50287	70976	682	
	+	77	43823	04870	02778	72525	96612	864
	—		1031	89786	88438	25552	94296	576
10 70	.16728	49901	49968	73177	22813	67589	658	
	+	77	42791	15083	14340	46973	02316	288
	—		1036	67401	14494	96909	20228	096
10 75	.16805	92692	65051	87517	69786	69905	834	
	+	77	41754	47681	99845	50063	82088	192
	—		1041	44951	45825	52018	47704	320
10 80	.16883	34447	12733	87363	19850	51994	079	
	+	77	40713	02730	54019	98045	34383	872
	—		1046	22437	52972	20610	97862	400
10 85	.16960	75160	15464	41383	17895	86378	030	
	+	77	39666	80293	01047	77434	36521	472
	—		1050	99859	06481	28692	85650	688
10 90	.17038	14826	95757	42430	95330	22899	476	
	+	77	38615	80433	94566	48741	50870	784
	—		1055	77215	76903	00363	05283	840
10 95	.17115	53442	76191	36997	44071	73770	244	
	+	77	37560	03218	17663	48378	45586	944
	—		1060	54507	34791	59629	91165	952

c	Sine							
11 00'	.17192	91002	79409	54660	92450	19357	263	
	+	77	36499	48710	82871	88748	54420 992	
	—		1065	31733	50705	32227	54119 424	
11 05	.17270	27502	28120	37532	81198	73778	240	
	+	77	35434	16977	32166	56521	00301 568	
	—		1070	08893	95206	47431	92857 344	
11 10	.17347	62936	45097	69699	37719	74079	737	
	+	77	34364	08083	36960	09089	07444 224	
	—		1074	85988	38861	39876	80544 000	
11 15	.17424	97300	53181	06659	46808	81523	850	
	+	77	33289	22094	98098	69212	26900 224	
	—		1079	63016	52240	51369	26363 136	
11 20	.17502	30589	75276	04758	16021	08424	294	
	+	77	32209	59078	45858	17843	00537 088	
	—		1084	39978	05918	32705	11966 976	
11 25	.17579	62799	34354	50616	33864	08961	278	
	+	77	31125	19100	39939	85137	88570 112	
	—		1089	16872	70473	45484	02690 304	
11 30	.17656	93924	53454	90556	19001	97531	498	
	+	77	30036	02227	69466	39653	85879 808	
	—		1093	93700	16488	63924	33434 112	
11 35	.17734	23960	55682	60022	58655	83411	281	
	+	77	28942	08527	52977	75729	52445 696	
	—		1098	70460	14550	76677	69091 072	
11 40	.17811	52902	64210	13000	34385	35856	784	
	+	77	27843	38067	38426	99051	83354 624	
	—		1103	47152	35250	88643	39405 056	
11 45	.17888	80746	02277	51427	33437	19211	456	
	+	77	26739	90915	03176	10408	43949 568	
	—		1108	23776	49184	22782	48160 512	

c	Sine							
11 50'	.17966	07485	93192	54603	43845	63161	108	
	+	77	25631	67138	53991	87625	95789 056	
	—		1113	00332	26950	21931	56577 280	
11 55	.18043	33117	60331	08595	31471	58950	203	
	+	77	24518	66806	27041	65694	39211 776	
	—		1117	76819	39152	50616	40811 008	
11 60	.18120	57636	27137	35636	97165	98162	034	
	+	77	23400	89986	87889	15077	98400 768	
	—		1122	53237	56398	96865	23435 264	
11 65	.18197	81037	17124	23526	12243	96562	591	
	+	77	22278	36749	31490	18212	74965 504	
	—		1127	29586	49301	74021	78809 600	
11 70	.18275	03315	53873	55016	30456	71528	068	
	+	77	21151	07162	82188	44190	96155 904	
	—		1132	05865	88477	22558	12194 816	
11 75	.18352	24466	61036	37204	74647	67684	140	
	+	77	20019	01296	93711	21632	83961 088	
	—		1136	82075	44546	11887	12549 120	
11 80	.18429	44485	62333	30915	96280	51645	293	
	+	77	18882	19221	49165	09745	71411 968	
	—		1141	58214	88133	42174	78828 800	
11 85	.18506	63367	81554	80081	06026	23057	157	
	+	77	17740	61006	61031	67570	92583 168	
	—		1146	34283	89868	46152	19751 936	
11 90	.18583	81108	42561	41112	73597	15640	428	
	+	77	16594	26722	71163	21418	72831 232	
	—		1151	10282	20384	90927	26855 424	
11 95	.18660	97702	69284	12275	95015	88471	663	
	+	77	15443	16440	50778	30491	45975 808	
	—		1155	86209	50320	79796	20772 864	

c	Sine							
12 00'	.18738	13145	85724	63054	25507	34447	473	
	+	77	14287	30231	00457	50695	25202 944	
	—		1160	62065	50318	54054	70591 488	
12 05	.18815	27433	15955	63511	76202	59650	378	
	+	77	13126	68165	50138	96640	54611 456	
	—		1165	37849	91024	94808	86208 512	
12 10	.18892	40559	84121	13650	72843	14261	797	
	+	77	11961	30315	59114	01831	68402 944	
	—		1170	13562	43091	24785	83543 040	
12 15	.18969	52521	14436	72764	74674	82664	600	
	+	77	10791	16753	16022	77045	84859 904	
	—		1174	89202	77173	10144	22511 104	
12 20	.19046	63312	31189	88787	51720	67524	563	
	+	77	09616	27550	38849	66901	62348 800	
	—		1179	64770	63930	62284	17654 016	
12 25	.19123	72928	58740	27637	18622	29873	287	
	+	77	08436	62779	74919	04617	44694 784	
	—		1184	40265	74028	39657	21290 240	
12 30	.19200	81365	21520	02556	23239	74568	106	
	+	77	07252	22514	00890	64960	23404 544	
	—		1189	15687	78135	49575	79101 696	
12 35	.19277	88617	44034	03446	88199	97972	682	
	+	77	06063	06826	22755	15384	44302 848	
	—		1193	91036	46925	50022	58026 496	
12 40	.19354	94680	50860	26202	03584	42275	583	
	+	77	04869	15789	75829	65361	86276 352	
	—		1198	66311	51076	51459	46351 360	
12 45	.19431	99549	66650	02031	68946	28551	813	
	+	77	03670	49478	24753	13902	39924 992	
	—		1203	41512	61271	18636	25896 192	

c	Sine							
12 50'	.19509	03220	16128	26784	82848	68477	025	
	+	77	02467	07965	63481	95266	14028 800	
	—		1208	16639	48196	72399	16175 616	
12 55	.19586	05687	24093	90266	78114	82505	786	
	+	77	01258	91326	15285	22866	97853 184	
	—		1212	91691	82544	91498	90422 016	
12 60	.19663	06946	15420	05552	00981	80358	983	
	+	77	00045	99634	32740	31368	07431 168	
	—		1217	66669	35012	14398	63365 888	
12 65	.19740	06992	15054	38292	32349	87790	148	
	+	76	98828	32964	97728	16969	44065 280	
	—		1222	41571	76299	41081	50663 680	
12 70	.19817	05820	48019	36020	49319	31855	313	
	+	76	97605	91393	21428	75887	93401 600	
	—		1227	16398	77112	34857	99843 328	
12 75	.19894	03426	39412	57449	25207	25256	911	
	+	76	96378	74994	44316	41029	93558 272	
	—		1231	91150	08161	24172	92684 032	
12 80	.19970	99805	14407	01765	66237	18815	104	
	+	76	95146	83844	36155	16857	00874 240	
	—		1236	65825	40161	04412	18895 360	
12 85	.20047	94951	98251	37920	83094	19689	447	
	+	76	93910	18018	95994	12444	81978 880	
	—		1241	40424	43831	39709	20998 656	
12 90	.20124	88862	16270	33914	95539	01668	259	
	+	76	92668	77594	52162	72735	60980 224	
	—		1246	14946	89896	64751	10283 264	
12 95	.20201	81530	93864	86077	68274	62648	496	
	+	76	91422	62647	62266	07984	50696 960	
	—		1250	89392	49085	86584	53754 624	

c	Sine						
13 00'	.20278	72953	56512	48343	76259	13345	443
	+	76	90171	73255	13180	21399	96942 336
	—		1255	63760	92132	86421	31923 456
13 05	.20355	63125	29767	61523	97659	10287	957
	+	76	88916	09494	21047	34978	65018 880
	—		1260	38051	89776	21443	67367 936
13 10	.20432	52041	39261	82571	32637	75306	830
	+	76	87655	71442	31271	13534	97650 944
	—		1265	12265	12759	26609	23915 008
13 15	.20509	39697	10704	13842	46172	72957	772
	+	76	86390	59177	18511	86925	73735 936
	—		1269	86400	31830	16455	76364 800
13 20	.20586	26087	69881	32354	33098	46693	606
	+	76	85120	72776	86681	70469	97371 136
	—		1274	60457	17741	86905	50624 768
13 25	.20663	11208	42658	19036	03568	44064	782
	+	76	83846	12319	68939	83564	46746 368
	—		1279	34435	41252	17069	34156 800
13 30	.20739	95054	54977	87975	87132	90811	194
	+	76	82566	77884	27687	66495	12589 568
	—		1284	08334	73123	71050	56605 696
13 35	.20816	77621	32862	15663	53628	03400	796
	+	76	81282	69549	54563	95444	55983 872
	—		1288	82154	84123	99748	40527 104
13 40	.20893	58904	02411	70227	49072	59384	558
	+	76	79993	87394	70439	95696	15456 768
	—		1293	55895	45025	42661	22072 320
13 45	.20970	38897	89806	40667	44768	74841	387
	+	76	78700	31499	25414	53034	93384 448
	—		1298	29556	26605	29689	41549 824

c	Sine							
13 50'	.21047	17598	21305	66081	97803	68225	734	
	+	76	77402	01942	98809	23345	51834 624	
	—		1303	03136	99645	82938	03716 864	
13 55	.21123	95000	23248	64891	21149	20060	313	
	+	76	76098	98805	99163	40407	48117 760	
	—		1307	76637	34934	18519	07728 384	
13 60	.21200	71099	22054	64054	61556	68178	277	
	+	76	74791	22168	64229	21888	40389 376	
	—		1312	50057	03262	48353	46601 216	
13 65	.21277	45890	44223	28283	83445	08567	443	
	+	76	73478	72111	60966	73534	93788 160	
	—		1317	23395	75427	81972	76099 584	
13 70	.21354	19369	16334	89250	56980	02355	682	
	+	76	72161	48715	85538	91562	17688 576	
	—		1321	96653	22232	28320	52918 528	
13 75	.21430	91530	65050	74789	48542	20044	371	
	+	76	70839	52062	63306	63241	64770 048	
	—		1326	69829	14482	97553	42075 648	
13 80	.21507	62370	17113	38096	11783	84814	425	
	+	76	69512	82233	48823	65688	22694 400	
	—		1331	42923	22992	02841	93366 784	
13 85	.21584	31882	99346	86919	77472	07508	648	
	+	76	68181	39310	25831	62846	29327 616	
	—		1336	15935	18576	62170	86808 320	
13 90	.21661	00064	38657	12751	40318	36836	384	
	+	76	66845	23375	07255	00675	42519 296	
	—		1340	88864	72059	00139	46931 456	
13 95	.21737	66909	62032	20006	40993	79355	628	
	+	76	65504	34510	35196	00535	95587 840	
	—		1345	61711	54266	49761	25832 448	

c	Sine						
14 00'	.21814	32413	96542	55202	41529	74943	366
	+	76	64158	72798	80929	50774	69755
	—		1350	34475	36031	54263	54850
14 05	.21890	96572	69341	36131	92304	44698	755
	+	76	62808	38323	44897	96511	14904
	—		1355	07155	88191	68886	64790
14 10	.21967	59381	07664	81029	88815	59603	767
	+	76	61453	31167	56706	27624	50114
	—		1359	79752	81589	62682	74542
14 15	.22044	20834	38832	37736	16440	09718	462
	+	76	60093	51414	75116	64941	75572
	—		1364	52265	87073	20314	48020
14 20	.22120	80927	90247	12852	81381	85290	786
	+	76	58728	99148	88043	44627	27551
	—		1369	24694	75495	43853	19293
14 25	.22197	39656	89396	00896	26009	12842	214
	+	76	57359	74454	12548	00774	08258
	—		1373	97039	17714	54576	85792
14 30	.22273	97016	63850	13444	26783	21100	625
	+	76	55985	77414	94833	46197	22466
	—		1378	69298	84593	94767	69502
14 35	.22350	53002	41265	08277	72980	43566	508
	+	76	54607	08116	10239	51429	52963
	—		1383	41473	47002	29509	46002
14 40	.22427	07609	49381	18517	24409	96529	723
	+	76	53223	66642	63237	21920	06960
	—		1388	13562	75813	48484	41271
14 45	.22503	60833	16023	81754	46330	03490	256
	+	76	51835	53079	87423	73435	65689
	—		1392	85566	41906	67769	96119

c	Sine							
14 50'	.22580	12668	69103	69178	19765	69179	722	
	+	76	50442	67513	45517	05665	69570 048	
	—		1397	57484	16166	31634	98160 896	
14 55	.22656	63111	36617	14695	25431	38749	682	
	+	76	49045	10029	29350	74030	71409 152	
	—		1402	29315	69482	14335	81198 080	
14 60	.22733	12156	46646	44045	99462	10158	842	
	+	76	47642	80713	59868	59694	90211 072	
	—		1407	01060	72749	21911	91911 680	
14 65	.22809	59799	27360	03914	59157	00369	914	
	+	76	46235	79652	87119	37782	98299 392	
	—		1411	72718	96867	93981	23762 176	
14 70	.22886	06035	07012	91033	96939	98669	417	
	+	76	44824	06933	90251	43801	74537 216	
	—		1416	44290	12744	05535	17953 280	
14 75	.22962	50859	13946	81285	40741	73206	528	
	+	76	43407	62643	77507	38266	56583 936	
	—		1421	15773	91288	68733	31393 792	
14 80	.23038	94266	76590	58792	79008	29790	540	
	+	76	41986	46869	86218	69533	25190 144	
	—		1425	87170	03418	34697	71511 552	
14 85	.23115	36253	23460	45011	48541	54980	600	
	+	76	40560	59699	82800	34835	53678 592	
	—		1430	58478	20054	95306	97826 560	
14 90	.23191	76813	83160	27811	83377	08659	171	
	+	76	39130	01221	62745	39528	55852 032	
	—		1435	29698	12125	84989	90160 384	
14 95	.23268	15943	84381	90557	22905	64511	252	
	+	76	37694	71523	50619	54538	65691 648	
	—		1440	00829	50563	82518	83392 256	

c	Sine							
15 00'	.23344	53638	55905	41176	77444	30202	963	
	+	76	36254	70694	00055	72019	82299 392	
	—		1444	71872	06307	12802	68621 312	
15 05	.23420	89893	26599	41232	49464	12502	175	
	+	76	34809	98821	93748	59217	13678 080	
	—		1449	42825	50299	48679	60650 496	
15 10	.23497	24703	25421	34981	08681	26180	274	
	+	76	33360	55996	43449	10537	53027 584	
	—		1454	13689	53490	12709	31670 528	
15 15	.23573	58063	81417	78430	19218	79208	063	
	+	76	31906	42306	89958	97828	21357 056	
	—		1458	84463	86833	78965	11030 272	
15 20	.23649	89970	23724	68389	17047	00565	036	
	+	76	30447	57843	03125	18863	10326 784	
	—		1463	55148	21290	74825	50987 008	
15 25	.23726	20417	81567	71514	35910	10891	827	
	+	76	28984	02694	81834	44037	59339 776	
	—		1468	25742	27826	82765	58335 744	
15 30	.23802	49401	84262	53348	79947	70231	512	
	+	76	27515	76952	54007	61272	01004 032	
	—		1472	96245	77413	42147	91781 632	
15 35	.23878	76917	61215	07356	41219	71235	534	
	+	76	26042	80706	76594	19124	09222 400	
	—		1477	66658	41027	51013	24973 568	
15 40	.23955	02960	41921	83950	60343	80457	973	
	+	76	24565	14048	35566	68110	84248 832	
	—		1482	36979	89651	67870	75070 208	
15 45	.24031	27525	55970	19517	28454	64706	772	
	+	76	23082	77068	45915	00240	09178 624	
	—		1487	07209	94274	13487	96734 464	

c	Sine							
15 50'	.24107	50608	33038	65432	28694	73885	439	
	+	76	21595	69858	51640	86752	12444 160	
	—		1491	77348	25888	72680	41444 608	
15 55	.24183	72204	02897	17073	15446	86329	580	
	+	76	20103	92510	25752	14071	70999 552	
	—		1496	47394	55494	96100	82014 976	
15 60	.24259	92307	95407	42825	29518	57329	060	
	+	76	18607	45115	70257	17970	88984 576	
	—		1501	17348	54098	02028	02202 624	
15 65	.24336	10915	40523	13082	47489	46313	750	
	+	76	17106	27767	16159	15942	86781 952	
	—		1505	87209	92708	78155	51322 624	
15 70	.24412	28021	68290	29241	63432	33095	612	
	+	76	15600	40557	23450	37787	35459 328	
	—		1510	56978	42343	83379	63706 624	
15 75	.24488	43622	08847	52692	01219	68555	134	
	+	76	14089	83578	81106	54407	71752 704	
	—		1515	26653	74025	49587	42959 104	
15 80	.24564	57711	92426	33798	55627	40307	813	
	+	76	12574	56925	07081	04820	28793 600	
	—		1519	96235	58781	83444	10844 160	
15 85	.24640	70286	49351	40879	60447	69101	331	
	+	76	11054	60689	48299	21376	17949 440	
	—		1524	65723	67646	68180	20733 440	
15 90	.24716	81341	10040	89178	81823	87050	828	
	+	76	09529	94965	80652	53195	97216 000	
	—		1529	35117	71659	65378	35475 968	
15 95	.24792	90871	05006	69831	35019	84266	737	
	+	76	08000	59848	08992	87817	61740 032	
	—		1534	04417	41866	16759	69606 656	

c	Sine							
16 00'	.24868	98871	64854	78824	22837	46006	670	
	+	76	06466	55430	67126	71057	92133 376	
	—		1538	73622	49317	45969	95747 840	
16 05	.24945	05338	20285	45950	93895	38140	180	
	+	76	04927	81808	17809	25087	96385 536	
	—		1543	42732	65070	60365	15143 680	
16 10	.25021	10266	02093	63760	18983	34525	719	
	+	76	03384	39075	52738	64722	81241 856	
	—		1548	11747	60188	52796	92160 256	
16 15	.25097	13650	41169	16498	83706	15767	464	
	+	76	01836	27327	92550	11925	89081 600	
	—		1552	80667	05740	03397	52685 568	
16 20	.25173	15486	68497	09048	95632	04849	126	
	+	76	00283	46660	86810	08528	36396 032	
	—		1557	49490	72799	81364	46295 552	
16 25	.25249	15770	15157	95859	04160	41245	243	
	+	75	98725	97170	14010	27163	90100 480	
	—		1562	18218	32448	46744	72099 584	
16 30	.25325	14496	12328	09869	31324	31345	621	
	+	75	97163	78951	81561	80419	18000 896	
	—		1566	86849	55772	52218	68106 240	
16 35	.25401	11659	91279	91431	11743	49346	551	
	+	75	95596	92102	25789	28200	49894 656	
	—		1571	55384	13864	44883	64071 680	
16 40	.25477	07256	83382	17220	39943	99241	319	
	+	75	94025	36718	11924	83316	85822 976	
	—		1576	23821	77822	68036	97653 248	
16 45	.25553	01282	20100	29145	23260	85064	249	
	+	75	92449	12896	34102	15279	88169 728	
	—		1580	92162	18751	62958	93797 376	

c	Sine							
16 50'	.25628	93731	32996	63247	38540	73233	989	
	+	75	90868	20734	15350	52320	94372 352	
	—		1585	60405	07761	70695	07242 496	
16 55	.25704	84599	53730	78597	90861	67606	241	
	+	75	89282	60329	07588	81625	87129 856	
	—		1590	28550	15969	33838	28017 408	
16 60	.25780	73882	14059	86186	72487	54736	011	
	+	75	87692	31778	91619	47787	59112 448	
	—		1594	96597	14496	98310	49843 200	
16 65	.25856	61574	45838	77806	20275	13848	633	
	+	75	86097	35181	77122	49477	09269 248	
	—		1599	64545	74473	15144	01312 768	
16 70	.25932	47671	81020	54928	69752	23117	746	
	+	75	84497	70636	02649	34333	07956 480	
	—		1604	32395	67032	42262	39740 160	
16 75	.26008	32169	51656	57578	04085	31074	365	
	+	75	82893	38240	35616	92070	68216 320	
	—		1609	00146	63315	46261	07586 816	
16 80	.26084	15062	89896	93194	96155	99290	613	
	+	75	81284	38093	72301	45809	60629 504	
	—		1613	67798	34469	04187	51328 000	
16 85	.26159	96347	27990	65496	41965	59920	249	
	+	75	79670	70295	37832	41622	09301 504	
	—		1618	35350	51646	05321	02672 384	
16 90	.26235	76017	98286	03328	83587	69221	553	
	+	75	78052	34944	86186	36301	06629 120	
	—		1623	02802	86005	52952	22007 552	
16 95	.26311	54070	33230	89515	19888	75850	768	
	+	75	76429	32142	00180	83348	84621 568	
	—		1627	70155	08712	66162	03988 736	

c	Sine							
17 00'	.26387	30499	65372	89696	03237	60472	301	
	+	75	74801	61986	91468	17186	80632	832
	—		1632	37406	90938	81600	45109	248
17 05	.26463	05301	27359	81164	20424	41105	107	
	+	75	73169	24580	00529	35586	35523	584
	—		1637	04558	03861	55264	73219	840
17 10	.26538	78470	51939	81693	56010	76628	847	
	+	75	71532	20021	96667	80321	62303	744
	—		1641	71608	18664	64277	38799	104
17 15	.26614	50002	71961	78361	36332	38932	391	
	+	75	69890	48413	78003	16044	23504	640
	—		1646	38557	06538	08663	67942	912
17 20	.26690	19893	20375	56364	52376	62437	148	
	+	75	68244	09856	71465	07380	55561	728
	—		1651	05404	38678	13128	76915	968
17 25	.26765	88137	30232	27829	59757	17998	871	
	+	75	66593	04452	32786	94251	78645	760
	—		1655	72149	86287	28834	48171	520
17 30	.26841	54730	34684	60616	54008	96644	633	
	+	75	64937	32302	46499	65417	30474	240
	—		1660	38793	20574	35175	67724	800
17 35	.26917	19667	66987	07116	19426	27118	972	
	+	75	63276	93509	25925	30241	62749	440
	—		1665	05334	12754	41556	23783	424
17 40	.26992	82944	60496	33041	49667	89868	193	
	+	75	61611	88175	13170	88685	38966	016
	—		1669	71772	34048	89164	66504	960
17 45	.27068	44556	48671	46212	38353	28834	326	
	+	75	59942	16402	79121	99520	72461	056
	—		1674	38107	55685	52749	28793	088

c	Sine							
17 50'	.27144	04498	65074	25334	37874	01295	467	
	+	75	58267	78295	23436	46771	968	
	—		1679	04339	48898	42393	08003 328	
17 55	.27219	62766	43369	48770	84645	44963	294	
	+	75	56588	73955	74538	04378	35664 640	
	—		1683	70467	84928	05288	08459 520	
17 60	.27295	19355	17325	23308	89023	80627	908	
	+	75	54905	03487	89609	99090	27205 120	
	—		1688	36492	35021	27509	44679 168	
17 65	.27370	74260	20813	12918	88114	07833	160	
	+	75	53216	66995	54588	71580	82525 952	
	—		1693	02412	70431	35789	05180 928	
17 70	.27446	27476	87808	67507	59694	90359	149	
	+	75	51523	64582	84157	35791	77345 024	
	—		1697	68228	62417	99288	76773 888	
17 75	.27521	79000	52391	51664	95486	67704	033	
	+	75	49825	96354	21739	36503	00571 136	
	—		1702	33939	82247	31373	29213 952	
17 80	.27597	28826	48745	73404	31989	68275	271	
	+	75	48123	62414	39492	05129	71357 184	
	—		1706	99546	01191	91382	60143 104	
17 85	.27672	76950	11160	12896	37119	39632	399	
	+	75	46416	62868	38300	13747	11214 080	
	—		1711	65046	90530	86404	00152 320	
17 90	.27748	23366	74028	51196	50866	50846	514	
	+	75	44704	97821	47769	27343	11061 760	
	—		1716	30442	21549	73043	77911 296	
17 95	.27823	68071	71849	98965	78209	61908	350	
	+	75	42988	67379	26219	54299	33150 464	
	—		1720	95731	65540	59198	45221 376	

c	Sine							
18 00'	.27899	11060	39229	25185	32508	95058	760	
	+	75	41267	71647	60678	95100	87929 088	
	—		1725	60914	93802	05825	61892 864	
18 05	.27974	52328	10876	85864	27609	82987	649	
	+	75	39542	10732	66876	89275	26036 224	
	—		1730	25991	77639	28714	40349 696	
18 10	.28049	91870	21609	52741	16885	09024	049	
	+	75	37811	84740	89237	60560	85686 528	
	—		1734	90961	88364	00255	49826 816	
18 15	.28125	29682	06350	41978	77445	94710	590	
	+	75	36076	93779	00873	60305	35859 712	
	—		1739	55824	97294	51210	80071 424	
18 20	.28200	65759	00129	42852	37751	30570	160	
	+	75	34337	37954	03579	09094	55788 288	
	—		1744	20580	75755	72482	64434 432	
18 25	.28276	00096	38083	46431	46845	86358	473	
	+	75	32593	17373	27823	36611	91353 856	
	—		1748	85228	95079	16882	62237 696	
18 30	.28351	32689	55456	74254	83457	77712	310	
	+	75	30844	32144	32744	19729	29116 160	
	—		1753	49769	26603	00900	00312 576	
18 35	.28426	63533	87601	06999	03187	06828	587	
	+	75	29090	82375	06141	18829	28803 584	
	—		1758	14201	41672	06469	73600 768	
18 40	.28501	92624	69976	13140	22016	35632	119	
	+	75	27332	68173	64469	12359	55202 816	
	—		1762	78525	11637	82740	04702 208	
18 45	.28577	19957	38149	77609	34375	90835	026	
	+	75	25569	89648	52831	29619	50500 608	
	—		1767	42740	07858	47839	62276 352	

c	Sine							
18 50'	.28652	45527	27798	30440	63995	41335	514	
	+	75	23802	46908	44972	81779	88224 256	
	—		1772	06846	01698	90644	38162 176	
18 55	.28727	69329	74706	75413	45775	29559	871	
	+	75	22030	40062	43273	91135	50062 080	
	—		1776	70842	64530	72543	83139 584	
18 60	.28802	91360	14769	18687	36910	79621	896	
	+	75	20253	69219	78743	18591	66922 496	
	—		1781	34729	67732	29207	01191 936	
18 65	.28878	11613	83988	97430	55502	46544	283	
	+	75	18472	34490	11010	89384	65730 560	
	—		1785	98506	82688	72348	02188 032	
18 70	.28953	30086	18479	08441	44887	12274	973	
	+	75	16686	35983	28322	17036	63542 528	
	—		1790	62173	80791	91491	12853 248	
18 75	.29028	46772	54462	36763	61923	75817	533	
	+	75	14895	73809	47530	25545	50689 280	
	—		1795	25730	33440	55735	45933 056	
18 80	.29103	61668	28271	84293	87469	26506	781	
	+	75	13100	48079	14089	69810	04756 224	
	—		1799	89176	12040	15519	27441 664	
18 85	.29178	74768	76350	98383	57279	31263	041	
	+	75	11300	58903	02049	54290	77314 560	
	—		1804	52510	88003	04383	81870 336	
18 90	.29253	86069	35254	00433	11570	08577	662	
	+	75	09496	06392	14046	49906	95444 224	
	—		1809	15734	32748	40736	75276 288	
18 95	.29328	95565	41646	14479	61477	04021	656	
	+	75	07686	90657	81298	09170	20167 936	
	—		1813	78846	17702	29615	16101 632	

c	Sine						
19 00'	.29404	03252	32303	95777	70647	24189	713
	+	75	05873	11811	63595	79555	04066 304
	—		1818	41846	14297	64448	13665 792
19 05	.29479	09125	44115	59373	50202	28255	892
	+	75	04054	69965	49298	15106	90400 512
	—		1823	04733	93974	28818	94168 064
19 10	.29554	13180	14081	08671	65309	18656	620
	+	75	02231	65231	55323	86287	96232 448
	—		1827	67509	28178	98226	74138 880
19 15	.29629	15411	79312	63995	51597	14888	902
	+	75	00403	97722	27144	88061	22093 568
	—		1832	30171	88365	41847	91192 320
19 20	.29704	15815	77034	91140	39658	36982	537
	+	74	98571	67550	38779	46213	30901 248
	—		1836	92721	45994	24296	92006 144
19 25	.29779	14387	44585	29919	85871	67883	670
	+	74	96734	74828	92785	21916	38895 104
	—		1841	55157	72533	07386	77390 592
19 30	.29854	11122	19414	22705	07788	06778	795
	+	74	94893	19671	20252	14529	61504 512
	—		1846	17480	39456	51889	04355 072
19 35	.29929	06015	39085	42957	22317	68283	411
	+	74	93047	02190	80795	62640	57149 440
	—		1850	79689	18246	19293	45064 192
19 40	.30003	99062	41276	23752	84958	25432	955
	+	74	91196	22501	62549	43347	12085 248
	—		1855	41783	80390	73567	02562 048
19 45	.30078	90258	63777	86302	28305	37518	206
	+	74	89340	80717	82158	69780	09523 200
	—		1860	03763	97385	82912	83165 952

c	Sine							
19 50'	.30153	79599	44495	68460	98085	47041	233	
	+	74	87480	76953	84772	86867	26357 248	
	—		1864	65629	40734	21528	25430 528	
19 55	.30228	67080	21449	53233	84952	73398	555	
	+	74	85616	11324	44038	65339	00926 720	
	—		1869	27379	81945	71362	85537 792	
19 60	.30303	52696	32773	97272	50291	74325	320	
	+	74	83746	83944	62092	93976	15388 928	
	—		1873	89014	92537	23875	79060 736	
19 65	.30378	36443	16718	59365	44267	89714	193	
	+	74	81872	94929	69555	70100	36328 192	
	—		1878	50534	44032	81792	78935 296	
19 70	.30453	18316	11648	28921	14368	26042	262	
	+	74	79994	44395	25522	88307	57392 896	
	—		1883	11938	07963	60862	69569 536	
19 75	.30527	98310	56043	54444	02675	83435	294	
	+	74	78111	32457	17559	27444	87823 360	
	—		1887	73225	55867	91613	56972 800	
19 80	.30602	76421	88500	72003	30120	71258	523	
	+	74	76223	59231	61691	35831	30850 560	
	—		1892	34396	59291	21108	34775 808	
19 85	.30677	52645	47732	33694	65952	02109	256	
	+	74	74331	24835	02400	14722	96074 752	
	—		1896	95450	89786	14700	06083 328	
19 90	.30752	26976	72567	36094	80674	98183	910	
	+	74	72434	29384	12614	00022	89991 424	
	—		1901	56388	18912	57786	60983 808	
19 95	.30826	99411	01951	48708	80697	88175	401	
	+	74	70532	72995	93701	42236	29007 616	
	—		1906	17208	18237	57565	09668 864	

c	Sine							
20 00'	.30901	69943	74947	42410	22934	17182	895	
	+	74	68626	55787	75463	84671	19338 752	
	—		1910	77910	59335	44785	71010 816	
20 05	.30976	38570	30735	17874	07605	36521	711	
	+	74	66715	77877	16128	39885	48327 936	
	—		1915	38495	13787	75505	16526 592	
20 10	.31051	05286	08612	34002	47490	84849	602	
	+	74	64800	39382	02340	64380	31801 344	
	—		1919	98961	53183	32839	69580 800	
20 15	.31125	70086	47994	36343	11871	16651	086	
	+	74	62880	40420	49157	31540	62220 544	
	—		1924	59309	49118	28717	59756 032	
20 20	.31200	32966	88414	85500	43411	78871	641	
	+	74	60955	81111	00039	02823	02464 512	
	—		1929	19538	73196	05631	32258 304	
20 25	.31274	93922	69525	85539	46234	81335	948	
	+	74	59026	61572	26842	97191	70206 208	
	—		1933	79648	97027	38389	12253 952	
20 30	.31349	52949	31098	12382	43426	51542	369	
	+	74	57092	81923	29815	58802	57952 256	
	—		1938	39639	92230	35866	24054 016	
20 35	.31424	10042	13021	42198	02229	09494	623	
	+	74	55154	42283	37585	22936	33898 240	
	—		1942	99511	30430	42755	64984 064	
20 40	.31498	65196	55304	79783	25165	43392	744	
	+	74	53211	42772	07154	80180	68914 176	
	—		1947	59262	83260	41318	33900 032	
20 45	.31573	18407	98076	86938	05346	12306	937	
	+	74	51263	83509	23894	38862	35014 144	
	—		1952	18894	22360	53133	14176 000	

c	Sine							
20 50'	.31647	69671	81586	10832	44208	47320	963	
	+	74	49311	64615	01533	85729	20838 144	
	—		1956	78405	19378	40846	11119 616	
20 55	.31722	18983	46201	12366	29937	68159	263	
	+	74	47354	86209	82155	44883	09718 528	
	—		1961	37795	45969	09919	43642 112	
20 60	.31796	66338	32410	94521	74820	77877	764	
	+	74	45393	48414	36186	34963	66076 416	
	—		1965	97064	73795	10379	90127 104	
20 65	.31871	11731	80825	30708	09784	43954	277	
	+	74	43427	51349	62391	24583	75949 312	
	—		1970	56212	74526	38566	88374 784	
20 70	.31945	55159	32174	93099	34368	19903	368	
	+	74	41456	95136	87864	86016	87574 528	
	—		1975	15239	19840	38879	89486 336	
20 75	.32019	96616	27311	80964	20385	07477	987	
	+	74	39481	79897	68024	47136	98088 192	
	—		1979	74143	81422	05525	65635 072	
20 80	.32094	36098	07209	48988	67522	05566	302	
	+	74	37502	05753	86602	41611	32453 120	
	—		1984	32926	30963	84264	71560 448	
20 85	.32168	73600	12963	35591	09133	38019	262	
	+	74	35517	72827	55638	57346	60892 672	
	—		1988	91586	40165	74157	59715 584	
20 90	.32243	09117	85790	91229	66479	98911	911	
	+	74	33528	81241	15472	83189	01177 088	
	—		1993	50123	80735	29310	48942 592	
20 95	.32317	42646	67032	06702	49669	00088	994	
	+	74	31535	31117	34737	53878	52234 496	
	—		1998	08538	24387	60620	46577 408	

c	Sine							
21 00'	.32391	74181	98149	41440	03547	52323	524	
	+	74	29537	22579	10349	93258	05657 088	
	—		2002	66829	42845	37520	23864 832	
21 05	.32466	03719	20728	51789	96805	57980	683	
	+	74	27534	55749	67504	55737	81792 256	
	—		2007	24997	07838	89722	44591 104	
21 10	.32540	31253	76478	19294	52543	39772	866	
	+	74	25527	30752	59665	66015	37201 152	
	—		2011	83040	91106	08963	46812 928	
21 15	.32614	56781	07230	78960	18558	76973	924	
	+	74	23515	47711	68559	57051	90388 224	
	—		2016	40960	64392	50746	77580 800	
21 20	.32688	80296	54942	47519	75610	67362	370	
	+	74	21499	06751	04167	06305	12807 424	
	—		2020	98755	99451	36085	80560 384	
21 25	.32763	01795	61693	51686	81915	80169	553	
	+	74	19478	07995	04715	70219	32247 040	
	—		2025	56426	68043	53246	36407 808	
21 30	.32837	21273	69688	56402	52135	12416	840	
	+	74	17452	51568	36672	16972	95839 232	
	—		2030	13972	41937	59488	55857 664	
21 35	.32911	38726	21256	93074	69108	08256	113	
	+	74	15422	37595	94734	57484	39981 568	
	—		2034	71392	92909	82808	25325 568	
21 40	.32985	54148	58852	87809	26592	48237	459	
	+	74	13387	66203	01824	74676	14656 000	
	—		2039	28687	92744	23678	05012 992	
21 45	.33059	67536	25055	89634	01268	62893	695	
	+	74	11348	37515	09080	50998	09643 008	
	—		2043	85857	13232	56787	79333 632	

c	Sine							
21 50'	.33133	78884	62570	98714	52266	72536	574	
	+	74	09304	51657	95847	94210	30309 376	
	—		2048	42900	26174	32784	59599 872	
21 55	.33207	88189	14228	94562	46477	02845	762	
	+	74	07256	08757	69673	61425	70709 504	
	—		2052	99817	03376	80012	38817 792	
21 60	.33281	95445	22986	64236	07902	73555	385	
	+	74	05203	08940	66296	81413	31891 712	
	—		2057	56607	16655	06250	98552 320	
21 65	.33356	00648	31927	30532	89316	05447	344	
	+	74	03145	52333	49641	75162	33339 392	
	—		2062	13270	37832	00454	67667 968	
21 70	.33430	03793	84260	80174	64478	38786	613	
	+	74	01083	39063	11809	74707	65671 424	
	—		2066	69806	38738	34490	32915 456	
21 75	.33504	04877	23323	91984	39186	04457	835	
	+	73	99016	69256	73071	40217	32755 968	
	—		2071	26214	91212	64875	01207 040	
21 80	.33578	03893	92580	65055	79403	37213	799	
	+	73	96945	43041	81858	75342	31548 928	
	—		2075	82495	67101	34513	13492 480	
21 85	.33652	00839	35622	46914	54745	68762	925	
	+	73	94869	60546	14757	40829	18056 448	
	—		2080	38648	38258	74433	10139 904	
21 90	.33725	95708	96168	61671	95574	86819	503	
	+	73	92789	21897	76498	66396	07916 544	
	—		2084	94672	76547	05523	47685 376	
21 95	.33799	88498	18066	38170	61970	94735	665	
	+	73	90704	27224	99951	60872	60231 168	
	—		2089	50568	53836	40268	66862 080	

c	Sine							
22 00'	.33873	79202	45291	38122	22843	54966	928	
	+	73	88614	76656	46115	20603	93369 088	
	—		2094	06335	42004	84484	11810 304	
22 05	.33947	67817	21947	84237	43447	48336	127	
	+	73	86520	70321	04110	36119	81558 784	
	—		2098	61973	12938	39051	00338 688	
22 10	.34021	54337	92268	88347	79567	29894	958	
	+	73	84422	08347	91171	97068	81220 096	
	—		2103	17481	38531	01650	45157 888	
22 15	.34095	38760	00616	79519	76636	11115	019	
	+	73	82318	90866	52640	95418	36062 208	
	—		2107	72859	90684	68497	25935 104	
22 20	.34169	21078	91483	32160	72054	47177	018	
	+	73	80211	18006	61956	26921	10127 104	
	—		2112	28108	41309	36073	12126 976	
22 25	.34243	01290	09489	94116	98975	57304	385	
	+	73	78098	89898	20646	90847	98000 128	
	—		2116	83226	62323	02859	36416 256	
22 30	.34316	79388	99388	14763	89823	55304	572	
	+	73	75982	06671	58323	87988	61583 872	
	—		2121	38214	25651	71069	18702 080	
22 35	.34390	55371	06059	73087	77812	16888	477	
	+	73	73860	68457	32672	16919	42881 792	
	—		2125	93071	03229	48379	40491 776	
22 40	.34464	29231	74517	05759	94731	59770	013	
	+	73	71734	75386	29442	68540	02390 016	
	—		2130	47796	66998	49661	69622 016	
22 45	.34538	00966	49903	35202	63271	62160	109	
	+	73	69604	27589	62444	18878	32768 000	
	—		2135	02390	88908	98713	35177 728	

c	Sine							
22 50'	.34611	70570	77492	97646	82149	94928	219	
	+	73	67469	25198	73535	20164	97590 272	
	—		2139	56853	40919	29987	52525 312	
22 55	.34685	38040	02691	71182	02314	92518	607	
	+	73	65329	68345	32615	90177	45064 960	
	—		2144	11183	94995	90322	98327 040	
22 60	.34759	03369	71037	03797	92492	37583	245	
	+	73	63185	57161	37619	99854	46737 920	
	—		2148	65382	23113	40673	35444 480	
22 65	.34832	66555	28198	41417	92346	84321	110	
	+	73	61036	91779	14506	59181	11293 440	
	—		2153	19447	97254	57835	87640 832	
22 70	.34906	27592	19977	55924	51527	95614	646	
	+	73	58883	72331	17252	01345	23652 608	
	—		2157	73380	89410	36179	63933 696	
22 75	.34979	86475	92308	73176	52873	19267	114	
	+	73	56725	98950	27841	65165	59718 912	
	—		2162	27180	71579	89373	32527 616	
22 80	.35053	43201	91259	01018	18038	78986	101	
	+	73	54563	71769	56261	75792	27191 296	
	—		2166	80847	15770	52112	44218 880	
22 85	.35126	97765	63028	57279	93831	06177	321	
	+	73	52396	90922	40491	23679	82972 416	
	—		2171	34379	93997	81846	05125 632	
22 90	.35200	50162	53950	97771	17510	89150	050	
	+	73	50225	56542	46493	41833	77846 784	
	—		2175	87778	78285	60502	98703 360	
22 95	.35274	00388	10493	44264	59344	66996	950	
	+	73	48049	68763	68207	81330	79143 424	
	—		2180	41043	40665	96217	56870 144	

c	Sine							
23 00'	.35347	48437	79257	12472	40675	46140	321	
	+	73	45869	27720	27541	85113	22273 280	
	—		2184	94173	53179	25054	80186 880	
23 05	.35420	94307	06977	40014	25788	68413	629	
	+	73	43684	33546	74362	60058	42086 400	
	—		2189	47168	87874	12735	06962 432	
23 10	.35494	37991	40524	14376	85847	10499	663	
	+	73	41494	86377	86488	47323	35123 968	
	—		2194	00029	16807	56358	31171 584	
23 15	.35567	79486	26902	00865	33170	45623	861	
	+	73	39300	86348	69680	90965	03952 384	
	—		2198	52754	12044	86127	69107 456	
23 20	.35641	18787	13250	70546	24135	49576	305	
	+	73	37102	33594	57636	04837	34844 928	
	—		2203	05343	45659	67072	74629 632	
23 25	.35714	55889	46845	28182	28972	84420	949	
	+	73	34899	28251	11976	37764	60215 296	
	—		2207	57796	89734	00772	02913 792	
23 30	.35787	90788	75096	40158	66737	44636	217	
	+	73	32691	70454	22242	36992	57301 504	
	—		2212	10114	16358	27075	22620 416	
23 35	.35861	23480	45550	62401	03730	01937	835	
	+	73	30479	60340	05884	09917	34681 088	
	—		2216	62294	97631	25824	76321 792	
23 40	.35934	53960	05890	68285	13647	36619	158	
	+	73	28262	98045	08252	84092	58359 296	
	—		2221	14339	05660	18576	89147 904	
23 45	.36007	82223	03935	76537	97739	94978	144	
	+	73	26041	83706	02592	65515	69211 392	
	—		2225	66246	12560	70322	25480 704	

c	Sine							
23 50'	.36081	08264	87641	79130	63255	64189	624	
	+	73	23816	17459	90031	95193	43730 688	
	—		2230	18015	90456	91205	93650 688	
23 55	.36154	32081	05101	69162	58449	07920	148	
	+	73	21585	99443	99575	03987	50080 000	
	—		2234	69648	11481	38246	98469 888	
23 60	.36227	53667	04545	68737	62436	58000	141	
	+	73	19351	29795	88093	65740	51610 112	
	—		2239	21142	47775	17057	41551 104	
23 65	.36300	73018	34341	56831	28177	09610	246	
	+	73	17112	08653	40318	48683	10059 008	
	—		2243	72498	71487	83560	69264 384	
23 70	.36373	90130	42994	97149	76860	19669	626	
	+	73	14868	36154	68830	65122	40794 624	
	—		2248	23716	54777	45709	68258 048	
23 75	.36447	04998	79149	65980	41982	60463	938	
	+	73	12620	12438	14053	19412	72536 576	
	—		2252	74795	69810	65204	08398 848	
23 80	.36520	17618	91587	80033	61395	33000	545	
	+	73	10367	37642	44242	54208	64137 728	
	—		2257	25735	88762	59207	33074 432	
23 85	.36593	27986	29230	24276	15603	97138	293	
	+	73	08110	11906	55479	95001	31063 296	
	—		2261	76536	83817	02062	96709 632	
23 90	.36666	36096	41136	79756	10605	28201	615	
	+	73	05848	35369	71662	92938	34353 664	
	—		2266	27198	27166	27010	49415 680	
23 95	.36739	41944	76506	51419	03543	62555	205	
	+	73	03582	08171	44496	65927	84937 984	
	—		2270	77719	91011	27900	68652 032	

c	Sine							
24 00'	.36812	45526	84677	95915	69471	47493	262	
	+	73	01311	30451	53485	38027	16285 952	
	—		2275	28101	47561	60910	37806 592	
24 05	.36885	46838	15129	49401	07498	63779	158	
	+	72	99036	02350	05923	77116	78479 360	
	—		2279	78342	69035	46256	71580 160	
24 10	.36958	45874	17479	55324	84615	42258	590	
	+	72	96756	24007	36888	30860	06899 200	
	—		2284	28443	27659	69910	88081 408	
24 15	.37031	42630	41486	92213	15475	49157	809	
	+	72	94471	95564	09228	60949	18817 792	
	—		2288	78402	95669	85311	27495 168	
24 20	.37104	37102	37051	01441	76424	67975	933	
	+	72	92183	17161	13558	75637	91322 624	
	—		2293	28221	45310	15076	17275 392	
24 25	.37177	29285	54212	15000	52062	59298	098	
	+	72	89889	88939	68248	60561	74047 232	
	—		2297	77898	48833	52715	83681 024	
24 30	.37250	19175	43151	83249	12624	33345	653	
	+	72	87592	11041	19415	07845	90366 208	
	—		2302	27433	78501	64344	09638 912	
24 35	.37323	06767	54193	02664	20470	23711	934	
	+	72	85289	83607	40913	43501	80727 296	
	—		2306	76827	06584	90389	38732 032	
24 40	.37395	92057	37800	43577	63972	04438	972	
	+	72	82983	06780	34328	53112	41995 264	
	—		2311	26078	05362	47305	25291 008	
24 45	.37468	75040	44580	77906	17084	46434	180	
	+	72	80671	80702	28966	05807	16704 256	
	—		2315	75186	47122	29280	30429 184	

c	Sine							
24 50'	.37541	55712	25283	06872	22891	63138	810	
	+	72	78356	05515	81843	76526	86275 072	
	—		2320	24152	04161	09947	63949 056	
24 55	.37614	34068	30798	88715	99418	49413	484	
	+	72	76035	81363	77682	66579	22326 016	
	—		2324	72974	48784	44093	71976 192	
24 60	.37687	10104	12162	66398	65997	71739	753	
	+	72	73711	08389	28898	22485	50349 824	
	—		2329	21653	53306	69366	70272 512	
24 65	.37759	83815	20551	95296	88483	22089	298	
	+	72	71381	86735	75591	53118	80077 312	
	—		2333	70188	90051	07984	23057 920	
24 70	.37832	55197	07287	70888	41602	02166	555	
	+	72	69048	16546	85540	45134	57019 392	
	—		2338	18580	31349	68440	67290 624	
24 75	.37905	24245	23834	56428	86736	59185	952	
	+	72	66709	97966	54190	76693	89728 768	
	—		2342	66827	49543	47213	82264 832	
24 80	.37977	90955	21801	10619	63430	48914	815	
	+	72	64367	31139	04647	29480	07463 936	
	—		2347	14930	16982	30471	04434 688	
24 85	.38050	55322	52940	15266	92910	56379	102	
	+	72	62020	16208	87664	99009	03029 248	
	—		2351	62888	06024	95774	87369 728	
24 90	.38123	17342	69149	02931	91919	59407	988	
	+	72	59668	53320	81640	03234	15659 520	
	—		2356	10700	89039	13788	06696 960	
24 95	.38195	77011	22469	84571	95153	75067	699	
	+	72	57312	42619	92600	89446	08962 560	
	—		2360	58368	38401	49978	09989 120	

c	Sine							
25 00'	.38268	34323	65089	77172	84599	84030	424	
	+	72	54951	84251	54199	39467	98973 440	
	—		2365	05890	26497	66321	11424 000	
25 05	.38340	89275	49341	31372	24067	83003	573	
	+	72	52586	78361	27701	73146	87549 440	
	—		2369	53266	25722	23005	31165 184	
25 10	.38413	41862	27702	59073	97214	70553	104	
	+	72	50217	25095	01979	50141	56384 256	
	—		2374	00496	08478	80133	79315 712	
25 15	.38485	92079	52797	61053	47356	26937	583	
	+	72	47843	24598	93500	70007	77068 544	
	—		2378	47579	47179	99426	84388 352	
25 20	.38558	39922	77396	54554	17364	04006	106	
	+	72	45464	77019	46320	70580	92680 192	
	—		2382	94516	14247	45923	66130 688	
25 25	.38630	85387	54416	00874	87944	96685	849	
	+	72	43081	82503	32073	24657	26549 504	
	—		2387	41305	82111	89683	52641 024	
25 30	.38703	28469	36919	32948	12602	23235	648	
	+	72	40694	41197	49961	34973	73908 480	
	—		2391	87948	23213	07486	41679 360	
25 35	.38775	69163	78116	82909	47575	97143	850	
	+	72	38302	53249	26748	27487	32229 120	
	—		2396	34443	09999	84533	05991 168	
25 40	.38848	07466	31366	09657	75063	29373	209	
	+	72	35906	18806	16748	42954	26237 952	
	—		2400	80790	14930	16144	42665 472	
25 45	.38920	43372	50172	26406	18017	55611	096	
	+	72	33505	38016	01818	26809	83572 480	
	—		2405	26989	10471	09460	66299 904	

c	Sine							
25 50'	.38992	76877	88188	28224	44827	39183	713	
	+	72	31100	11026	91347	17349	17272 576	
	—		2409	73039	69098	85139	45937 408	
25 55	.39065	07977	99215	19571	62176	56455	989	
	+	72	28690	37987	22248	32209	71335 168	
	—		2414	18941	63298	79053	85657 344	
25 60	.39137	36668	37202	41819	94386	27791	281	
	+	72	26276	19045	58949	53155	85677 824	
	—		2418	64694	65565	43989	48709 888	
25 65	.39209	62944	56248	00769	47542	13469	321	
	+	72	23857	54350	93384	09166	36967 936	
	—		2423	10298	48402	51341	25080 064	
25 70	.39281	86802	10598	94153	56708	50436	946	
	+	72	21434	44052	44981	57825	11887 872	
	—		2427	55752	84322	92809	42402 560	
25 75	.39354	08236	54651	39135	14533	62325	127	
	+	72	19006	88299	60658	65015	69485 312	
	—		2432	01057	45848	82095	20092 672	
25 80	.39426	27243	42950	99793	79549	31810	351	
	+	72	16574	87242	14809	82920	49392 640	
	—		2436	46212	05511	56595	66618 624	
25 85	.39498	43818	30193	14603	62469	81203	123	
	+	72	14138	41030	09298	26324	82774 016	
	—		2440	91216	35851	79098	19786 240	
25 90	.39570	57956	71223	23901	88794	63977	049	
	+	72	11697	49813	73446	47226	62987 776	
	—		2445	36070	09419	39474	29933 056	
25 95	.39642	69654	21036	97348	36021	26964	540	
	+	72	09252	13743	64027	07752	33054 720	
	—		2449	80772	98773	56372	85963 776	

c	Sine							
26 00'	.39714	78906	34780	61375	43773	60019	641	
	+	72	06802	32970	65253	51379	47090 944	
	—		2454	25324	76482	78912	84055 552	
26 05	.39786	85708	67751	26628	95153	07110	549	
	+	72	04348	07645	88770	72466	63035 392	
	—		2458	69725	15124	88375	38999 296	
26 10	.39858	90056	75397	15399	67619	70145	884	
	+	72	01889	37920	73645	84091	24036 096	
	—		2463	13973	87286	99895	38028 032	
26 15	.39930	91946	13317	89045	51710	94181	858	
	+	71	99426	23946	86358	84195	86008 064	
	—		2467	58070	65565	64152	37026 816	
26 20	.40002	91372	37264	75404	35906	80189	931	
	+	71	96958	65876	20793	20043	48981 248	
	—		2472	02015	22566	69060	99068 416	
26 25	.40074	88331	03140	96197	55950	29171	070	
	+	71	94486	63860	98226	50982	49912 832	
	—		2476	45807	30905	41460	75098 624	
26 30	.40146	82817	67001	94424	06932	79083	879	
	+	71	92010	18053	67321	09521	74814 208	
	—		2480	89446	63206	48805	26719 488	
26 35	.40218	74827	85055	61745	16454	53898	246	
	+	71	89529	28607	04114	60716	48094 720	
	—		2485	32932	92104	00850	90969 088	
26 40	.40290	64357	13662	65859	77171	01992	915	
	+	71	87043	95674	12010	59865	57125 632	
	—		2489	76265	90241	51344	86928 896	
26 45	.40362	51401	09336	77870	37036	59118	719	
	+	71	84554	19408	21769	08520	70196 736	
	—		2494	19445	30271	99712	64159 232	

c	Sine							
26 50'	.40434	35955	28744	99639	45557	29315	112	
	+	71	82059	99962	91497	08808	06037 504	
	—		2498	62470	84857	92744	92745 728	
26 55	.40506	18015	28707	91136	54365	35352	816	
	+	71	79561	37492	06639	16063	13291 776	
	—		2503	05342	26671	26283	94947 584	
26 60	.40577	97576	66199	97775	70428	48644	807	
	+	71	77058	32149	79967	89779	18344 192	
	—		2507	48059	28393	46909	18285 824	
26 65	.40649	74634	98349	77743	60207	66988	908	
	+	71	74550	84090	51574	42870	00058 368	
	—		2511	90621	62715	53622	49986 560	
26 70	.40721	49185	82440	29318	03077	67047	063	
	+	71	72038	93468	88858	89247	50071 808	
	—		2516	33029	02337	99532	72666 624	
26 75	.40793	21224	75909	18176	92325	17118	904	
	+	71	69522	60439	86520	89714	77405 184	
	—		2520	75281	19970	93539	61199 104	
26 80	.40864	90747	36349	04697	82039	94524	014	
	+	71	67001	85158	66549	96175	16206 080	
	—		2525	17377	88334	02017	20561 664	
26 85	.40936	57749	21507	71247	78215	10730	215	
	+	71	64476	67780	78215	94157	95644 416	
	—		2529	59318	80156	50496	64690 176	
26 90	.41008	22225	89288	49463	72373	06374	436	
	+	71	61947	08461	98059	43661	30954 240	
	—		2534	01103	68177	25348	36107 264	
26 95	.41079	84172	97750	47523	16034	37329	060	
	+	71	59413	07358	29882	18312	94846 976	
	—		2538	42732	25144	75463	66327 296	

c	Sine							
27 00'	.41151	43586	05108	77405	34347	32175	833	
	+	71	56874	64626	04737	42849	28519 680	
	—		2542	84204	23817	13935	76850 944	
27 05	.41223	00460	69734	82142	77196	60695	602	
	+	71	54331	80421	80920	28913	51668 736	
	—		2547	25519	36962	19740	20726 784	
27 10	.41294	54792	50156	63063	06110	12364	066	
	+	71	51784	54902	43958	09173	30941 952	
	—		2551	66677	37357	39414	64467 456	
27 15	.41366	06577	05059	07021	15283	43306	475	
	+	71	49232	88225	06600	69758	66474 496	
	—		2556	07677	97789	88738	10367 488	
27 20	.41437	55809	93284	13621	85042	09780	788	
	+	71	46676	80547	08810	81020	56107 008	
	—		2560	48520	91056	54409	58942 720	
27 25	.41509	02486	73831	22432	66062	65887	642	
	+	71	44116	32026	17754	26610	97164 288	
	—		2564	89205	89963	95726	11554 304	
27 30	.41580	46603	05857	40186	92673	63051	982	
	+	71	41551	42820	27790	30884	85609 984	
	—		2569	29732	67328	46260	12993 024	
27 35	.41651	88154	48677	67977	23558	48661	857	
	+	71	38982	13087	60461	84624	72616 960	
	—		2573	70100	95976	15536	33973 248	
27 40	.41723	27136	61765	28439	08183	21279	036	
	+	71	36408	42986	64485	69088	38643 712	
	—		2578	10310	48742	90707	93444 864	
27 45	.41794	63545	04751	92924	77271	59922	436	
	+	71	33830	32676	15742	78380	45198 848	
	—		2582	50360	98474	38232	20572 160	

c	Sine							
27 50'	.41865	97375	37428	08667	55652	05121	777	
	+	71	31247	82315	17268	40148	24626 688	
	—		2586	90252	18026	05545	56328 448	
27 55	.41937	28623	19743	25935	95800	29748	064	
	+	71	28660	92062	99242	34602	68298 240	
	—		2591	29983	80263	22737	94562 048	
27 60	.42008	57284	11806	25178	30402	98046	359	
	+	71	26069	62079	18979	11864	73736 192	
	—		2595	69555	58061	04226	62453 760	
27 65	.42079	83353	73885	44157	42267	71782	619	
	+	71	23473	92523	60918	07638	11282 432	
	—		2600	08967	24304	50429	40258 816	
27 70	.42151	06827	66409	05075	49905	83065	167	
	+	71	20873	83556	36613	57208	71023 616	
	—		2604	48218	51888	49437	20227 840	
27 75	.42222	27701	49965	41689	07114	54088	844	
	+	71	18269	35337	84725	07771	50795 776	
	—		2608	87309	13717	78686	04590 592	
27 80	.42293	45970	85303	26414	14886	04884	474	
	+	71	15660	48028	71007	29085	46205 184	
	—		2613	26238	82707	06628	42527 232	
27 85	.42364	61631	33331	97421	43971	51089	449	
	+	71	13047	21789	88300	22457	03677 952	
	—		2617	65007	31780	94404	06004 224	
27 90	.42435	74678	55121	85721	66428	54767	754	
	+	71	10429	56782	56519	28052	97673 728	
	—		2622	03614	33873	97510	04370 432	
27 95	.42506	85108	11904	42240	94481	52441	268	
	+	71	07807	53168	22645	30542	93303 296	
	—		2626	42059	61930	67470	37625 856	

c	Sine							
28 00'	.42577	92915	65072	64886	25024	45744	540	
	+	71	05181	11108	60714	63072	55677 440	
	—		2630	80342	88905	53504	88236 032	
28 05	.42648	98096	76181	25600	88097	01422	318	
	+	71	02550	30765	71809	09567	67441 408	
	—		2635	18463	87763	04197	51424 512	
28 10	.42720	00647	06946	97409	97664	68863	481	
	+	70	99915	12301	84046	05370	16016 896	
	—		2639	56422	31477	69164	03803 136	
28 15	.42791	00562	19248	81456	03034	84880	389	
	+	70	97275	55879	52568	36206	12213 760	
	—		2643	94217	93034	00719	10248 448	
28 20	.42861	97837	75128	34024	39240	97094	129	
	+	70	94631	61661	59534	35487	01965 312	
	—		2648	31850	45426	55542	68955 136	
28 25	.42932	92469	36789	93558	74727	99059	437	
	+	70	91983	29811	14107	79944	33010 176	
	—		2652	69319	61659	96345	94502 144	
28 30	.43003	84452	66601	07666	54672	32069	588	
	+	70	89330	60491	52447	83598	38508 032	
	—		2657	06625	14748	93536	38877 184	
28 35	.43074	73783	27092	60114	38270	70577	679	
	+	70	86673	53866	37698	90061	99630 848	
	—		2661	43766	77718	26882	50350 592	
28 40	.43145	60456	80958	97813	28332	70208	751	
	+	70	84012	10099	59980	63179	49280 256	
	—		2665	80744	23602	87177	70063 360	
28 45	.43216	44468	91058	57793	91512	19488	794	
	+	70	81346	29355	36377	76001	79216 896	
	—		2670	17557	25447	77903	66270 976	

c	Sine							
28 50'	.43287	25815	20413	94171	67513	98705	892	
	+	70	78676	11798	10929	98098	12945 920	
	—		2674	54205	56308	16893	06112 512	
28 55	.43358	04491	32212	05101	65612	11651	833	
	+	70	76001	57592	54621	81205	06833 408	
	—		2678	90688	89249	37991	64799 488	
28 60	.43428	80492	89804	59723	46817	18485	240	
	+	70	73322	66903	65372	43213	42033 920	
	—		2683	27006	97346	92719	72157 952	
28 65	.43499	53815	56708	25095	90030	60518	723	
	+	70	70639	39896	68025	50493	69875 968	
	—		2687	63159	53686	51932	96356 864	
28 70	.43570	24454	96604	93121	40524	30394	894	
	+	70	67951	76737	14338	98560	73519 104	
	—		2691	99146	31364	07482	64800 768	
28 75	.43640	92406	73342	07460	39085	03913	774	
	+	70	65259	77590	82974	91078	08718 336	
	—		2696	34967	03485	73875	22008 576	
28 80	.43711	57666	50932	90435	30163	12632	136	
	+	70	62563	42623	79489	17202	86709 760	
	—		2700	70621	43167	89931	24425 728	
28 85	.43782	20229	93556	69924	47365	99342	305	
	+	70	59862	72002	36321	27271	62284 032	
	—		2705	06109	23537	20443	72058 624	
28 90	.43852	80092	65559	06245	74637	61625	918	
	+	70	57157	65893	12784	06827	90225 408	
	—		2709	41430	17730	57835	76795 648	
28 95	.43923	37250	31452	19029	81465	51851	711	
	+	70	54448	24462	95053	48992	13429 760	
	—		2713	76583	98895	23817	67369 216	

c	Sine							
29 00'	.43993	91698	55915	14083	30457	65281	028	
	+	70	51734	47878	96158	25174	544	
	—		2718	11570	40188	71043	30802 688	
29 05	.44064	43433	03794	10241	55632	11341	963	
	+	70	49016	36308	55969	54131	15257 856	
	—		2722	46389	14778	84765	90287 360	
29 10	.44134	92449	40102	66211	09763	26599	680	
	+	70	46293	89919	41190	69365	24970 496	
	—		2726	81039	95843	84493	19329 792	
29 15	.44205	38743	30022	07401	79128	51570	072	
	+	70	43567	08879	45346	84872	05640 704	
	—		2731	15522	56572	25641	92134 144	
29 20	.44275	82310	38901	52748	64000	57211	083	
	+	70	40835	93356	88774	59230	13506 560	
	—		2735	49836	70163	01191	70073 600	
29 25	.44346	23146	32258	41523	23230	70717	211	
	+	70	38100	43520	18611	58038	43432 960	
	—		2739	83982	09825	43338	24139 264	
29 30	.44416	61246	75778	60134	81269	14150	322	
	+	70	35360	59538	08786	14700	19293 696	
	—		2744	17958	48779	25145	93330 688	
29 35	.44486	96607	35316	68920	95969	33444	141	
	+	70	32616	41579	60006	89554	25963 008	
	—		2748	51765	60254	62199	78782 720	
29 40	.44557	29223	76896	28927	85523	59407	219	
	+	70	29867	89813	99752	27354	47180 288	
	—		2752	85403	17492	14256	73635 328	
29 45	.44627	59091	66710	28680	12878	06587	328	
	+	70	27115	04410	82260	13097	73544 960	
	—		2757	18870	93742	86896	28468 224	

c	Sine							
29 50'	.44697	86206	71121	10940	25975	80132	255	
	+	70	24357	85539	88517	26201	45076 736	
	—		2761	52168	62268	33170	52215 808	
29 55	.44768	10564	56660	99457	52177	25209	057	
	+	70	21596	33371	26248	93030	92860 928	
	—		2765	85295	96340	55253	48504 576	
29 60	.44838	32160	90032	25706	45208	18070	269	
	+	70	18830	48075	29908	37777	44356 352	
	—		2770	18252	69242	06089	87227 136	
29 65	.44908	50991	38107	55614	82985	62426	589	
	+	70	16060	29822	60666	31687	57129 216	
	—		2774	51038	54265	91043	11342 080	
29 70	.44978	67051	67930	16281	14673	19555	787	
	+	70	13285	78784	06400	40644	45787 136	
	—		2778	83653	24715	69542	78732 288	
29 75	.45048	80337	46714	22681	55317	65342	665	
	+	70	10506	95130	81684	71101	67054 848	
	—		2783	16096	53905	56731	39040 256	
29 80	.45118	90844	41845	04366	26419	32397	720	
	+	70	07723	79034	27779	14370	28014 592	
	—		2787	48368	15160	25110	45406 720	
29 85	.45188	98568	20879	32145	40789	60412	212	
	+	70	04936	30666	12618	89259	82607 872	
	—		2791	80467	81815	06186	00954 880	
29 90	.45259	03504	51545	44764	30049	43020	285	
	+	70	02144	50198	30803	83073	81652 992	
	—		2796	12395	27215	92113	39968 000	
29 95	.45329	05649	01743	75568	13123	24673	273	
	+	69	99348	37803	03587	90960	41684 992	
	—		2800	44150	24719	37341	43645 696	

c	Sine							
30 00'	.45399	04997	39546	79156	04083	66358	057	
	+	69	96547	93652	78868	53618	98039 296	
	—		2804	75732	47692	60255	90306 304	
30 05	.45469	01545	33199	58024	57702	64397	388	
	+	69	93743	17920	31175	93363	07732 992	
	—		2809	07141	69513	44822	39997 952	
30 10	.45538	95288	51119	89200	51065	72130	343	
	+	69	90934	10778	61662	48540	67735 040	
	—		2813	38377	63570	42228	53348 352	
30 15	.45608	86222	61898	50862	99606	39865	261	
	+	69	88120	72400	98092	06312	14386 688	
	—		2817	69440	03262	72525	44589 824	
30 20	.45678	74343	34299	48955	05918	54251	824	
	+	69	85303	02960	94829	33786	69796 864	
	—		2822	00328	62000	26268	68669 952	
30 25	.45748	59646	37260	43784	39705	24048	988	
	+	69	82481	02632	32829	07518	01126 912	
	—		2826	31043	13203	66158	42302 976	
30 30	.45818	42127	39892	76613	47223	25176	003	
	+	69	79654	71589	19625	41359	58823 936	
	—		2830	61583	30304	28678	98895 872	
30 35	.45888	21782	11481	96238	88582	83999	647	
	+	69	76824	10005	89321	12680	59928 064	
	—		2834	91948	86744	25737	77248 256	
30 40	.45957	98606	21487	85560	01263	43928	020	
	+	69	73989	18057	02576	86942	82679 808	
	—		2839	22139	55976	46303	43895 040	
30 45	.46027	72595	39544	88136	88206	26607	683	
	+	69	71149	95917	46600	40639	38784 768	
	—		2843	52155	11464	58043	49028 864	

c	Sine							
30 50'	.46097	43745	35462	34737	28845	65392	524	
	+	69	68306	43762	35135	82595	89755	904
	—		2847	81995	26683	08961	15874	304
30 55	.46167	12051	79224	69873	11441	55148	401	
	+	69	65458	61767	08452	73634	73881	600
	—		2852	11659	75117	29031	63411	456
30 60	.46236	77510	40991	78325	85076	29029	983	
	+	69	62606	50107	33335	44603	10470	144
	—		2856	41148	30263	31837	62388	992
30 65	.46306	40116	91099	11661	29679	39500	092	
	+	69	59750	08959	03072	12765	48081	152
	—		2860	70460	65628	16204	24454	144
30 70	.46375	99867	00058	14733	42444	87581	346	
	+	69	56889	38498	37443	96561	23627	008
	—		2864	99596	54729	67833	24374	528
30 75	.46445	56756	38556	52177	39006	11208	366	
	+	69	54024	38901	82714	28727	99252	480
	—		2869	28555	71096	60936	55197	696
30 80	.46515	10780	77458	34891	67734	10460	738	
	+	69	51155	10346	11617	67791	44054	784
	—		2873	57337	88268	59869	16259	840
30 85	.46584	61935	87804	46509	35525	54515	654	
	+	69	48281	53008	23349	07922	27794	944
	—		2877	85942	79796	20761	33980	672
30 90	.46654	10217	40812	69858	43447	82310	556	
	+	69	45403	67065	43552	87160	93814	272
	—		2882	14370	19240	93150	15267	328
30 95	.46723	55621	07878	13411	30608	76124	887	
	+	69	42521	52695	24311	94010	78546	944
	—		2886	42619	80175	21610	33508	352

c	Sine							
31 00'	.46792	98142	60573	37723	24619	54671	473	
	+	69	39635	10075	44136	72400	45038 592	
	—		2890	70691	36182	47384	47003 136	
31 05	.46862	37777	70648	81859	97019	99709	968	
	+	69	36744	39384	07954	25015	98035 456	
	—		2894	98584	60857	10012	49744 896	
31 10	.46931	74522	10032	89814	22035	97745	775	
	+	69	33849	40799	47097	15003	48290 560	
	—		2899	26299	27804	48960	54460 416	
31 15	.47001	08371	50832	36911	37039	46036	071	
	+	69	30950	14500	19292	66042	93830 144	
	—		2903	53835	10641	05249	07791 360	
31 20	.47070	39321	65332	56204	03082	39866	440	
	+	69	28046	60665	08651	60793	86038 784	
	—		2907	81191	82994	23080	37539 328	
31 25	.47139	67368	25997	64855	63876	25905	204	
	+	69	25138	79473	25657	37713	48499 456	
	—		2912	08369	18502	51465	31848 704	
31 30	.47208	92507	05470	90513	01589	74404	504	
	+	69	22226	71104	07154	86248	16650 752	
	—		2916	35366	90815	45849	50249 984	
31 35	.47278	14733	76574	97667	87837	91055	264	
	+	69	19310	35737	16339	40398	66400 768	
	—		2920	62184	73593	69738	66434 048	
31 40	.47347	34044	12312	14007	28236	57456	375	
	+	69	16389	73552	42745	70659	99966 720	
	—		2924	88822	40508	96323	42713 856	
31 45	.47416	50433	85864	56752	98896	57422	968	
	+	69	13464	84730	02236	74336	57252 864	
	—		2929	15279	65244	10103	35976 960	

c	Sine							
31 50'	.47485	63898	70594	58989	73233	14675	900	
	+	69	10535	69450	36992	64233	21275 904	
	—		2933	41556	21493	08510	35154 944	
31 55	.47554	74434	40044	95982	37466	35951	440	
	+	69	07602	27894	15499	55722	86120 960	
	—		2937	67651	82961	03531	29976 832	
31 60	.47623	82036	67939	11481	93189	22072	804	
	+	69	04664	60242	32538	52191	56144 128	
	—		2941	93566	23364	23330	11024 384	
31 65	.47692	86701	28181	44020	45380	78216	837	
	+	69	01722	66676	09174	28861	45119 744	
	—		2946	19299	16430	13869	00892 160	
31 70	.47761	88423	94857	53194	74242	23336	699	
	+	68	98776	47376	92744	14992	44227 584	
	—		2950	44850	35897	40529	16443 136	
31 75	.47830	87200	42234	45938	89234	67563	805	
	+	68	95826	02526	56846	74463	27784 448	
	—		2954	70219	55515	89730	61949 440	
31 80	.47899	83026	44761	02785	63697	95348	482	
	+	68	92871	32307	01330	84732	65835 008	
	—		2958	95406	49046	70551	53161 728	
31 85	.47968	75897	77068	04116	48430	61183	300	
	+	68	89912	36900	52284	14181	12673 280	
	—		2963	20410	90262	16346	72046 080	
31 90	.48037	65810	13968	56400	62611	73856	833	
	+	68	86949	16489	62021	97834	40627 200	
	—		2967	45232	52945	86365	52238 592	
31 95	.48106	52759	30458	18422	60446	14483	907	
	+	68	83981	71257	09076	11468	88388 608	
	—		2971	69871	10892	67368	94996 992	

c	Sine							
32 00'	.48175	36741	01715	27498	71915	02872	429	
	+	68	81010	01385	98183	44099	93391 616	
	—		2975	94326	37908	75246	15632 896	
32 05	.48244	17751	03101	25682	16014	96264	240	
	+	68	78034	07059	60274	68853	77758 720	
	—		2980	18598	07811	56630	20287 488	
32 10	.48312	95785	10160	85956	84868	74023	163	
	+	68	75053	88461	52463	12223	57471 232	
	—		2984	42685	94429	90513	12953 856	
32 15	.48381	70838	98622	38419	97092	31493	910	
	+	68	72069	45775	58033	21710	44517 376	
	—		2988	66589	71603	89860	32629 248	
32 20	.48450	42908	44397	96453	18802	76011	727	
	+	68	69080	79185	86429	31850	11888 128	
	—		2992	90309	13185	03224	20583 424	
32 25	.48519	11989	23583	82882	50652	87899	442	
	+	68	66087	88876	73244	28625	91304 704	
	—		2997	13843	93036	16357	17478 912	
32 30	.48587	78077	12460	56126	79278	79204	139	
	+	68	63090	75032	80208	12268	73825 792	
	—		3001	37193	85031	53823	90447 616	
32 35	.48656	41167	87493	36334	91547	53030	178	
	+	68	60089	37838	95176	58444	83378 176	
	—		3005	60358	63056	80612	89836 032	
32 40	.48725	01257	25332	31511	49992	36408	462	
	+	68	57083	77480	32119	77831	93542 144	
	—		3009	83338	01009	03747	35653 888	
32 45	.48793	58341	02812	63631	27824	29950	275	
	+	68	54073	94142	31110	74084	57888 256	
	—		3014	06131	72796	73895	33554 176	

c	Sine							
32 50'	.48862	12414	96954	94742	01908	87838	861	
	+	68	51059	88010	58314	00189	24334 080	
	—		3018	28739	52339	86979	20279 040	
32 55	.48930	63474	84965	53056	02098	12173	000	
	+	68	48041	59271	05974	13210	04055 040	
	—		3022	51161	13569	85784	38445 056	
32 60	.48999	11516	44236	59030	15308	16227	775	
	+	68	45019	08109	92404	27425	65609 984	
	—		3026	73396	30429	61567	40603 392	
32 65	.49067	56535	52346	51434	42733	81837	909	
	+	68	41992	34713	61974	65858	25006 592	
	—		3030	95444	76873	55663	22440 704	
32 70	.49135	98527	87060	13409	08592	06844	576	
	+	68	38961	39268	85101	10195	02565 888	
	—		3035	17306	26867	61091	85046 528	
32 75	.49204	37489	26328	98510	18787	09410	408	
	+	68	35926	21962	58233	49103	17519 360	
	—		3039	38980	54389	24164	26141 696	
32 80	.49272	73415	48291	56743	67890	26929	517	
	+	68	32886	82982	03844	24938	91377 664	
	—		3043	60467	33427	46087	60143 360	
32 85	.49341	06302	31273	60587	92829	18307	375	
	+	68	29843	22514	70416	78851	31234 304	
	—		3047	81766	37982	84569	67027 712	
32 90	.49409	36145	53788	31004	71680	49541	768	
	+	68	26795	40748	32433	94281	64206 592	
	—		3052	02877	42067	55422	69824 000	
32 95	.49477	62940	94536	63438	65962	13748	155	
	+	68	23743	37870	90366	38858	94382 592	
	—		3056	23800	19705	34166	40673 792	

c	Sine							
33 00'	.49545	86684	32407	53805	04821	08130	704	
	+	68	20687	14070	70661	04692	53708 800	
	—		3060	44534	44931	57630	35377 152	
33 05	.49614	07371	46478	24466	09513	61839	558	
	+	68	17626	69536	25729	47062	18331 648	
	—		3064	65079	91793	25555	56267 520	
33 10	.49682	24998	16014	50195	56575	80171	394	
	+	68	14562	04456	33936	21506	62064 128	
	—		3068	85436	34349	02195	43387 136	
33 15	.49750	39560	20470	84131	78082	42235	646	
	+	68	11493	19019	99587	19311	18676 992	
	—		3073	05603	46669	17915	93805 824	
33 20	.49818	51053	39490	83718	97393	60912	614	
	+	68	08420	13416	52918	01395	24871 168	
	—		3077	25581	02835	70795	09012 992	
33 25	.49886	59473	52907	36636	98788	85783	505	
	+	68	05342	87835	50082	30600	15858 176	
	—		3081	45368	76942	28221	70290 688	
33 30	.49954	64816	40742	86719	29389	01641	961	
	+	68	02261	42466	73140	02378	45567 488	
	—		3085	64966	43094	28493	41947 392	
33 35	.50022	67077	83209	59859	31767	47209	385	
	+	67	99175	77500	30045	73885	03620 096	
	—		3089	84373	75408	82414	02312 704	
33 40	.50090	66253	60709	89905	05652	50829	510	
	+	67	96085	93126	54636	91471	01307 392	
	—		3094	03590	48014	74890	02447 360	
33 45	.50158	62339	53836	44541	97123	52136	735	
	+	67	92991	89536	06622	16580	98860 032	
	—		3098	22616	35052	66526	52368 896	

c	Sine							
33 50'	.50226	55331	43372	51164	13704	50996	533	
	+	67	89893	66919	71569	50054	46491	136
	—		3102	41451	10674	95222	34805	760
33 55	.50294	45225	10292	22733	63758	97487	761	
	+	67	86791	25468	60894	54832	11685	376
	—		3106	60094	49045	77764	46315	520
33 60	.50362	32016	35760	83628	18591	09173	242	
	+	67	83684	65374	11848	77067	65369	856
	—		3110	78546	24341	11421	65648	896
33 65	.50430	15701	01134	95476	95658	74543	345	
	+	67	80573	86827	87507	65645	99720	960
	—		3114	96806	10748	75537	49364	224
33 70	.50497	96274	87962	82984	61304	74264	047	
	+	67	77458	90021	76758	90108	50356	736
	—		3119	14873	82468	33122	54457	856
33 75	.50565	73733	77984	59743	51413	24620	757	
	+	67	74339	75147	94290	56985	95898	880
	—		3123	32749	13711	32445	88011	520
33 80	.50633	48073	53132	54034	08399	20519	630	
	+	67	71216	42398	80579	24540	07887	360
	—		3127	50431	78701	08625	83748	608
33 85	.50701	19289	95531	34613	32939	28406	870	
	+	67	68088	91967	01878	15914	24138	752
	—		3131	67921	51672	85220	05314	560
33 90	.50768	87378	87498	36491	48853	52545	867	
	+	67	64957	24045	50205	30694	18824	192
	—		3135	85218	06873	75814	76328	448
33 95	.50836	52336	11543	86696	79547	71370	050	
	+	67	61821	38827	43331	54879	42495	744
	—		3140	02321	18562	85613	36966	144

c	Sine							
34 00'	.50904	14157	50371	30028	34427	13865	613	
	+	67	58681	36506	24768	69266	05529 600	
	—		3144	19230	61011	13024	27058 176	
34 05	.50971	72838	86877	54797	03693	19395	434	
	+	67	55537	17275	63757	56241	78471 424	
	—		3148	35946	08501	51247	95601 408	
34 10	.51039	28376	04153	18554	59934	97866	574	
	+	67	52388	81329	55256	04993	82870 016	
	—		3152	52467	35328	89863	36549 888	
34 15	.51106	80764	85482	73810	64928	80736	560	
	+	67	49236	28862	19927	15130	46320 128	
	—		3156	68794	15800	16413	50804 480	
34 20	.51174	30001	14344	93737	80059	27056	958	
	+	67	46079	60068	04126	98716	95515 648	
	—		3160	84926	24234	17990	34321 920	
34 25	.51241	76080	74412	97864	78776	22572	738	
	+	67	42918	75141	79892	80726	61193 728	
	—		3165	00863	34961	82818	92227 072	
34 30	.51309	18999	49554	77757	59502	83766	479	
	+	67	39753	74278	44930	97907	68966 656	
	—		3169	16605	22326	01840	78811 648	
34 35	.51376	58753	23833	22688	57410	52733	155	
	+	67	36584	57673	22604	96066	90155 008	
	—		3173	32151	60681	70296	63387 136	
34 40	.51443	95337	81506	45293	53477	42887	923	
	+	67	33411	25521	61923	25770	26767 872	
	—		3177	47502	24395	89308	21783 552	
34 45	.51511	28749	07028	07216	79247	69655	899	
	+	67	30233	78019	37527	36462	04984 320	
	—		3181	62656	87847	67459	53546 752	

c	Sine							
34 50'	.51578	58982	85047	44744	15709	74639	943	
	+	67	27052	15362	49679	69002	51437 568	
	—		3185	77615	25428	22377	24577 792	
34 55	.51645	86035	00409	94423	84712	26077	867	
	+	67	23866	37747	24251	46625	26859 776	
	—		3189	92377	11540	82310	35239 424	
34 60	.51713	09901	38157	18675	31337	52937	600	
	+	67	20676	45370	12710	64314	91620 352	
	—		3194	06942	20600	87709	13769 472	
34 65	.51780	30577	83527	31385	95652	44558	020	
	+	67	17482	38427	92109	76605	77850 880	
	—		3198	21310	27035	92803	34907 392	
34 70	.51847	48060	21955	23495	72258	22408	867	
	+	67	14284	17117	65073	83802	42943 488	
	—		3202	35481	05285	67179	63683 840	
34 75	.51914	62344	39072	88569	56060	65352	379	
	+	67	11081	81636	59788	16622	79259 648	
	—		3206	49454	29801	97358	24204 288	
34 80	.51981	73426	20709	48357	72683	44611	993	
	+	67	07875	32182	29986	19264	55055 360	
	—		3210	63229	75048	88368	93377 536	
34 85	.52048	81301	52891	78343	91947	99666	997	
	+	67	04664	68952	54937	30895	61677 824	
	—		3214	76807	15502	65326	19494 400	
34 90	.52115	85966	21844	33281	22843	61345	058	
	+	67	01449	92145	39434	65569	42183 424	
	—		3218	90186	25651	75003	65533 696	
34 95	.52182	87416	13989	72715	88413	03528	268	
	+	66	98231	01959	13782	90565	76649 728	
	—		3223	03366	79996	87407	77098 240	

c	Sine							
35 00'	.52249	85647	15948	86498	78978	80178	033	
	+	66	95007	98592	33786	03157	99551 488	
	—		3227	16348	53050	97350	74925 056	
35 05	.52316	80655	14541	20284	82136	79729	808	
	+	66	91780	82243	80735	05807	24626 432	
	—		3231	29131	19339	26022	71816 192	
35 10	.52383	72435	96785	01019	87944	04356	136	
	+	66	88549	53112	61395	79784	52810 240	
	—		3235	41714	53399	22563	13934 848	
35 15	.52450	60985	49897	62415	67728	57166	148	
	+	66	85314	11398	07996	57221	38875 392	
	—		3239	54098	29780	65631	46352 128	
35 20	.52517	46299	61295	70412	24949	96041	748	
	+	66	82074	57299	78215	91589	92523 264	
	—		3243	66282	23045	64977	02747 136	
35 25	.52584	28374	18595	48628	16539	88564	994	
	+	66	78830	91017	55170	26612	89776 128	
	—		3247	78266	07768	63008	19175 936	
35 30	.52651	07205	09613	03798	43152	78340	970	
	+	66	75583	12751	47401	63604	70600 192	
	—		3251	90049	58536	36360	71794 176	
35 35	.52717	82788	22364	51200	06757	48941	197	
	+	66	72331	22701	88865	27243	98806 016	
	—		3256	01632	49947	97465	38448 896	
35 40	.52784	55119	45066	40065	34001	47747	493	
	+	66	69075	21069	38917	29778	60357 120	
	—		3260	13014	56614	96114	84051 456	
35 45	.52851	24194	66135	78982	63780	08104	449	
	+	66	65815	08054	82302	33663	76305 664	
	—		3264	24195	53161	21029	69601 024	

c	Sine							
35 50'	.52917	90009	74190	61284	97443	84409	971	
	+	66	62550	83859	29141	12634	06704 640	
	—		3268	35175	14223	01423	84806 912	
35 55	.52984	52560	58049	90426	10077	91114	604	
	+	66	59282	48684	14918	11210	21897 728	
	—		3272	45953	14449	08569	04185 856	
35 60	.53051	11843	06734	05344	21288	13012	535	
	+	66	56010	02731	00469	02641	17711 872	
	—		3276	56529	28500	57358	66523 648	
35 65	.53117	67853	09465	05813	23929	30724	352	
	+	66	52733	46201	71968	45282	51188 224	
	—		3280	66903	31051	07870	77658 624	
35 70	.53184	20586	55666	77781	69211	81912	590	
	+	66	49452	79298	40917	37411	73529 600	
	—		3284	77074	96786	66930	36425 216	
35 75	.53250	70039	34965	18699	06623	55442	107	
	+	66	46168	02223	44130	70481	37104 384	
	—		3288	87044	00405	89670	83701 760	
35 80	.53317	16207	37188	62829	77104	92546	545	
	+	66	42879	15179	43724	80810	53402 624	
	—		3292	96810	16619	81094	74470 400	
35 85	.53383	59086	52368	06554	57915	45949	266	
	+	66	39586	18369	27104	99715	78932 224	
	—		3297	06373	20151	97633	72751 872	
35 90	.53449	98672	70737	33659	57631	24881	566	
	+	66	36289	11996	06953	02082	06180 352	
	—		3301	15732	85738	48707	69373 696	
35 95	.53516	34961	82733	40612	59713	31061	563	
	+	66	32987	96263	21214	53374	36806 656	
	—		3305	24888	88127	98283	22425 344	

c	Sine							
36 00'	.53582	67949	78996	61827	13087	67868	289	
	+	66	29682	71374	33086	55091	14381 312	
	—		3309	33841	02081	66431	20333 824	
36 05	.53648	97632	50370	94913	68178	82249	913	
	+	66	26373	37533	31004	88659	94047 488	
	—		3313	42589	02373	30883	67473 664	
36 10	.53715	24005	87904	25918	56838	76297	047	
	+	66	23059	94944	28631	57776	26573 824	
	—		3317	51132	63789	28589	92167 936	
36 15	.53781	47065	82848	54550	14615	02871	080	
	+	66	19742	43811	64842	29186	34405 888	
	—		3321	59471	61128	57271	77032 704	
36 20	.53847	66808	26660	19392	43801	37276	994	
	+	66	16420	84340	03713	71914	57373 184	
	—		3325	67605	69202	76978	11552 768	
36 25	.53913	83229	11000	23106	15715	94649	994	
	+	66	13095	16734	34510	94936	45820 416	
	—		3329	75534	62836	11638	66776 576	
36 30	.53979	96324	27734	57617	10652	40470	715	
	+	66	09765	41199	71674	83297	79043 840	
	—		3333	83258	16865	50616	92067 328	
36 35	.54046	06089	68934	29291	93950	19514	299	
	+	66	06431	57941	54809	32680	86976 512	
	—		3337	90776	06140	50262	33782 272	
36 40	.54112	12521	26875	84101	26631	06490	712	
	+	66	03093	67165	48668	82418	53194 240	
	—		3341	98088	05523	35461	75792 640	
36 45	.54178	15614	94041	32770	09049	59685	163	
	+	65	99751	69077	43145	46956	77401 600	
	—		3346	05193	89889	01190	01774 592	

c	Sine							
36 50'	.54244	15366	63118	75915	56006	37086	749	
	+	65	96405	63883	53256	45766	75627 008	
	—		3350	12093	34125	14059	79144 192	
36 55	.54310	11772	27002	29172	01773	12713	729	
	+	65	93055	51790	19131	31706	96482 816	
	—		3354	18786	13132	13870	64530 432	
36 60	.54376	04827	78792	48303	33480	09196	674	
	+	65	89701	33004	05999	17836	31952 384	
	—		3358	25272	01823	15157	30760 704	
36 65	.54441	94529	11796	54302	51316	41148	725	
	+	65	86343	07732	04176	02679	01191 680	
	—		3362	31550	75124	08737	15156 480	
36 70	.54507	80872	19528	58478	53995	42340	683	
	+	65	82980	76181	29051	93941	86035 200	
	—		3366	37622	07973	63256	89150 464	
36 75	.54573	63852	95709	87530	47937	28375	714	
	+	65	79614	38559	21078	30684	96884 736	
	—		3370	43485	75323	26738	49048 576	
36 80	.54639	43467	34269	08608	78622	25260	740	
	+	65	76243	95073	45755	03946	47836 160	
	—		3374	49141	52137	28124	27892 736	
36 85	.54705	19711	29342	54363	82568	73096	909	
	+	65	72869	45931	93617	75822	19943 424	
	—		3378	54589	13392	78821	28286 720	
36 90	.54770	92580	75274	47981	58390	93040	263	
	+	65	69490	91342	80224	97000	91656 704	
	—		3382	59828	34079	74244	76160 512	
36 95	.54836	62071	66617	28206	55391	84696	789	
	+	65	66108	31514	46145	22756	15496 192	
	—		3386	64858	89200	95360	95259 136	

c	Sine							
37 00'	.54902	28179	98131	74351	78148	00193	056	
	+	65	62721	66655	56944	27395	20237 056	
	—		3390	69680	53772	10229	02405 632	
37 05	.54967	90901	64787	31296	05543	20429	935	
	+	65	59330	96975	03172	17166	17831 424	
	—		3394	74293	02821	75542	23313 408	
37 10	.55033	50232	61762	34468	22709	38261	708	
	+	65	55936	22682	00350	41623	94518 016	
	—		3398	78696	11391	38168	28951 040	
37 15	.55099	06168	84444	34818	64333	32779	531	
	+	65	52537	43985	88959	03455	65566 976	
	—		3402	82889	54535	36688	92283 904	
37 20	.55164	58706	28430	23777	67788	98346	550	
	+	65	49134	61096	34423	66766	73283 072	
	—		3406	86873	07321	02938	65368 064	
37 25	.55230	07840	89526	58201	34555	71629	553	
	+	65	45727	74223	27102	63828	07915 008	
	—		3410	90646	44828	63542	76662 272	
37 30	.55295	53568	63749	85303	98383	79544	667	
	+	65	42316	83576	82274	00285	31252 736	
	—		3414	94209	42151	41454	48450 560	
37 35	.55360	95885	47326	67577	98669	10797	103	
	+	65	38901	89367	40122	58830	82802 176	
	—		3418	97561	74395	57491	34323 712	
37 40	.55426	34787	36694	07700	57499	93599	468	
	+	65	35482	91805	65727	01339	48478 464	
	—		3423	00703	16680	31870	76608 000	
37 45	.55491	70270	28499	73427	58839	42078	187	
	+	65	32059	91102	49046	69468	71870 464	
	—		3427	03633	44137	85744	83602 432	

c	Sine							
37 50'	.55557	02330	19602	22474	28308	13948	535	
	+	65	28632	87469	04908	83723	88268 032	
	—		3431	06352	31913	42734	26614 272	
37 55	.55622	30963	07071	27383	12032	02216	219	
	+	65	25201	81116	72995	40989	61653 760	
	—		3435	08859	55165	30461	56614 656	
37 60	.55687	56164	88188	00378	53021	63870	136	
	+	65	21766	72257	17830	10528	05039 104	
	—		3439	11154	89064	82083	40479 488	
37 65	.55752	77931	60445	18208	63549	68909	489	
	+	65	18327	61102	28765	28444	64559 616	
	—		3443	13238	08796	37822	16699 392	
37 70	.55817	96259	21547	46973	91994	33468	929	
	+	65	14884	47864	19968	90622	47860 224	
	—		3447	15108	89557	46496	70430 720	
37 75	.55883	11143	69411	66942	82616	81329	105	
	+	65	11437	32755	30411	44125	77429 504	
	—		3451	16767	06558	67052	27872 768	
37 80	.55948	22581	02166	97354	26742	58758	702	
	+	65	07986	15988	23852	77073	49556 736	
	—		3455	18212	35023	70089	69805 312	
37 85	.56013	30567	18155	21207	03816	08315	560	
	+	65	04530	97775	88829	06983	79751 424	
	—		3459	19444	50189	39393	64197 888	
37 90	.56078	35098	15931	10036	10799	88066	699	
	+	65	01071	78331	38639	67590	15553 536	
	—		3463	20463	27305	73460	17865 216	
37 95	.56143	36169	94262	48675	78390	03620	238	
	+	64	97608	57868	11333	94129	97688 320	
	—		3467	21268	41635	87023	46969 600	

c	Sine							
38 00'	.56208	33778	52130	60009	72520	01308	808	
	+	64	94141	36599	69698	07106	50718	720
	—		3471	21859	68456	12581	66370	816
38 05	.56273	27919	88730	29707	79626	52027	583	
	+	64	90670	14740	01241	94524	84347	904
	—		3475	22236	83056	01921	97678	592
38 10	.56338	18590	03470	30949	74151	36375	439	
	+	64	87194	92503	18185	92602	86669	312
	—		3479	22399	60738	27644	95902	208
38 15	.56403	05784	95973	49135	66754	23044	613	
	+	64	83715	70103	57447	64957	90767	104
	—		3483	22347	76818	84687	94669	568
38 20	.56467	89500	66077	06583	31712	13811	505	
	+	64	80232	47755	80628	80269	96097	536
	—		3487	22081	06626	91847	69841	152
38 25	.56532	69733	13832	87212	11982	09909	084	
	+	64	76745	25674	74001	88422	26256	384
	—		3491	21599	25504	93302	21465	088
38 30	.56597	46478	39507	61214	00404	36165	850	
	+	64	73254	04075	48496	95120	04791	296
	—		3495	20902	08808	60131	74011	904
38 35	.56662	19732	43583	09710	95524	40956	838	
	+	64	69758	83173	39688	34988	30779	392
	—		3499	19989	31906	91838	94701	056
38 40	.56726	89491	26756	49399	30512	71736	526	
	+	64	66259	63184	07781	43149	36078	336
	—		3503	18860	70182	17868	29939	712
38 45	.56791	55750	89940	57180	73662	07814	424	
	+	64	62756	44323	37599	25281	06138	624
	—		3507	17515	99029	99124	59683	328

c	Sine							
38 50'	.56856	18507	34263	94779	98943	13953	320	
	+	64	59249	26807	38569	26156	46455 296	
	—		3511	15954	93859	29490	69687 296	
38 55	.56920	77756	61071	33349	25099	60408	598	
	+	64	55738	10852	44709	96665	76768 000	
	—		3515	14177	30092	37344	41535 488	
38 60	.56985	33494	71923	78059	21765	37176	599	
	+	64	52222	96675	14617	59321	35232 512	
	—		3519	12182	83164	87074	60324 864	
38 65	.57049	85717	68598	92676	81086	72409	084	
	+	64	48703	84492	31452	72246	74907 648	
	—		3523	09971	28525	80596	39971 328	
38 70	.57114	34421	53091	24129	53333	47316	601	
	+	64	45180	74521	02926	91650	34936 320	
	—		3527	07542	41637	58865	65982 720	
38 75	.57178	79602	27612	27056	44983	82253	245	
	+	64	41653	66978	61289	32784	68953 600	
	—		3531	04895	97976	03392	55668 224	
38 80	.57243	21255	94590	88345	77768	51206	745	
	+	64	38122	62082	63313	29392	13285 376	
	—		3535	02031	73030	37754	35591 680	
38 85	.57307	59378	56673	51659	07160	64491	801	
	+	64	34587	60050	90282	91637	77693 696	
	—		3538	98949	42303	29107	36327 168	
38 90	.57371	93966	16724	41941	98798	42185	864	
	+	64	31048	61101	47979	62530	41366 528	
	—		3542	95648	81310	89698	04252 160	
38 95	.57436	25014	77825	89921	61328	83552	299	
	+	64	27505	65452	66668	72832	37114 368	
	—		3546	92129	65582	78373	30425 344	

c	Sine							
39 00'	.57500	52520	43278	56590	34161	20666	683	
	+	64	23958	73323	01085	94459	06689 024	
	—		3550	88391	70662	02089	96377 600	
39 05	.57564	76479	16601	57676	28620	27355	507	
	+	64	20407	84931	30423	92369	10311 424	
	—		3554	84434	72105	17423	36738 816	
39 10	.57628	96887	01532	88100	20989	37666	971	
	+	64	16853	00496	58318	74945	73572 608	
	—		3558	80258	45482	32075	18626 816	
39 15	.57693	13740	02029	46418	95935	11239	509	
	+	64	13294	20238	12836	42870	54945 792	
	—		3562	75862	66377	06380	37691 904	
39 20	.57757	27034	22267	59255	38805	66185	346	
	+	64	09731	44375	46459	36490	17253 888	
	—		3566	71247	10386	54813	30704 896	
39 25	.57821	36765	66643	05714	75295	83439	251	
	+	64	06164	73128	36072	81676	86548 992	
	—		3570	66411	53121	47493	04648 704	
39 30	.57885	42930	39771	41787	56972	69988	115	
	+	64	02594	06716	82951	34183	81900 288	
	—		3574	61355	70206	11687	82144 512	
39 35	.57949	45524	46488	24738	91156	51888	416	
	+	63	99019	45361	12745	22495	99755 776	
	—		3578	56079	37278	33318	63206 400	
39 40	.58013	44543	91849	37484	13652	51644	453	
	+	63	95440	89281	75466	89177	36549 376	
	—		3582	50582	29989	58462	03154 944	
39 45	.58077	39984	81131	12951	02829	88193	908	
	+	63	91858	38699	45477	30715	33394 432	
	—		3586	44864	24004	94852	06637 568	

c	Sine						
39 50'	.58141	31843	19830	58428	33545	21588	207
	+	63	88271	93835	21472	35863	864
	—		3590	38924	95003	13381	37669 632
39 55	.58205	20115	13665	79900	69408	48345	020
	+	63	84681	54910	26469	22481	89087 232
	—		3594	32764	18676	49601	45568 256
39 60	.58269	04796	68576	06369	91890	37432	346
	+	63	81087	22146	07792	72880	43518 976
	—		3598	26381	70731	05222	06715 904
39 65	.58332	85883	90722	14162	64770	80951	189
	+	63	77488	95764	37061	67658	36803 072
	—		3602	19777	26886	49609	82066 176
39 70	.58396	63372	86486	51224	32429	17754	518
	+	63	73886	75987	10175	18048	54736 896
	—		3606	12950	62876	21285	90250 496
39 75	.58460	37259	62473	61399	50477	72491	325
	+	63	70280	63036	47298	96762	64486 400
	—		3610	05901	54447	29422	96273 920
39 80	.58524	07540	25510	08698	47240	36977	445
	+	63	66670	57134	92851	67339	68212 480
	—		3613	98629	77360	55341	15621 376
39 85	.58587	74210	82645	01550	14580	05190	304
	+	63	63056	58505	15491	11998	52591 104
	—		3617	91135	07390	54003	33747 712
39 90	.58651	37267	41150	17041	26578	57781	410
	+	63	59438	67370	08100	57995	18843 392
	—		3621	83417	20325	55509	40829 184
39 95	.58714	96706	08520	25141	84573	76624	664
	+	63	55816	83952	87775	02485	78014 208
	—		3625	75475	91967	66589	81681 152

c	Sine						
40 00'	.58778	52522	92473	12916	87059	54639	092
	+	63	52191	08476	95807	35895	96333 056
	—		3629	67310	98132	72098	20770 816
40 05	.58842	04714	00950	08724	22955	50972	077
	+	63	48561	41165	97674	63797	75562 240
	—		3633	58922	14650	36503	22213 376
40 10	.58905	53275	42116	06398	86753	26534	306
	+	63	44927	82243	83024	27294	53348 864
	—		3637	50309	17364	05379	44659 968
40 15	.58968	98203	24359	89423	14047	79882	908
	+	63	41290	31934	65660	21915	08688 896
	—		3641	41471	82131	06897	51013 376
40 20	.59032	39493	56294	55083	35962	88572	098
	+	63	37648	90462	83529	15017	57675 520
	—		3645	32409	84822	53313	32838 912
40 25	.59095	77142	46757	38612	50980	46247	369
	+	63	34003	58052	98706	61704	24836 608
	—		3649	23123	01323	42456	49387 008
40 30	.59159	11146	04810	37319	12684	71084	067
	+	63	30354	34929	97383	19247	75449 600
	—		3653	13611	07532	59217	81196 288
40 35	.59222	41500	39740	34702	31932	46533	823
	+	63	26701	21318	89850	60029	94253 312
	—		3657	03873	79362	77035	98076 416
40 40	.59285	68201	61059	24552	91962	40786	963
	+	63	23044	17445	10487	82993	96176 896
	—		3660	93910	92740	59383	41470 208
40 45	.59348	91245	78504	35040	74956	36963	895
	+	63	19383	23534	17747	23610	54706 688
	—		3664	83722	23606	61251	21076 224

c	Sine						
40 50'	.59412	10629	02038	52787	98566	91670	575
	+	63	15718	39811	94140	62359	33630 464
	—		3668	73307	47915	30633	25608 448
40 55	.59475	26347	41850	46928	60926	25300	826
	+	63	12049	66504	46225	31726	08022 016
	—		3672	62666	41635	10009	47660 288
40 60	.59538	38397	08354	93153	92652	33323	115
	+	63	08377	03838	04590	21716	60361 728
	—		3676	51798	80748	37828	22532 608
40 65	.59601	46774	12192	97744	14368	93684	550
	+	63	04700	52039	23841	83888	37829 120
	—		3680	40704	41251	49987	80938 240
40 70	.59664	51474	64232	21585	98257	31513	785
	+	63	01020	11334	82590	33900	56890 880
	—		3684	29382	99154	81317	15540 480
40 75	.59727	52494	75567	04176	32157	88404	766
	+	62	97335	81951	83435	52583	41350 400
	—		3688	17834	30482	67055	61169 920
40 80	.59790	49830	57518	87611	84741	29754	946
	+	62	93647	64117	52952	85527	80180 480
	—		3692	06058	11273	44331	88655 616
40 85	.59853	43478	21636	40564	70269	09935	392
	+	62	89955	58059	41679	41195	91524 864
	—		3695	94054	17579	53642	12206 592
40 90	.59916	33433	79695	82244	11465	01460	701
	+	62	86259	64005	24099	87553	79318 272
	—		3699	81822	25467	40327	10199 808
40 95	.59979	19693	43701	06343	99018	80778	701
	+	62	82559	82182	98632	47226	69118 464
	—		3703	69362	11017	56048	59321 856

c	Sine							
41 00'	.60042	02253	25884	04976	46245	49897	124	
	+	62	78856	12820	87614	91178	09796 608	
	—		3707	56673	50324	60264	81963 520	
41 05	.60104	81109	38704	92591	37423	59693	998	
	+	62	75148	56147	37290	30913	27833 088	
	—		3711	43756	19497	21705	06766 336	
41 10	.60167	56257	94852	29881	68336	87526	868	
	+	62	71437	12391	17793	09208	21066 752	
	—		3715	30609	94658	19843	42248 448	
41 15	.60230	27695	07243	47674	77545	08593	782	
	+	62	67721	81781	23134	89364	78818 304	
	—		3719	17234	51944	46371	63403 776	
41 20	.60292	95416	89024	70809	66909	87411	729	
	+	62	64002	64546	71190	42993	15414 528	
	—		3723	03629	67507	06671	11174 656	
41 25	.60355	59419	53571	42000	09903	02826	650	
	+	62	60279	60917	03683	36322	04239 872	
	—		3726	89795	17511	21284	04761 088	
41 30	.60418	19699	14488	45683	46225	07066	464	
	+	62	56552	71121	86172	15037	99478 784	
	—		3730	75730	78136	27383	66577 664	
41 35	.60480	76251	85610	31855	61263	06545	334	
	+	62	52821	95391	08035	87654	32901 120	
	—		3734	61436	25575	80243	59882 240	
41 40	.60543	29073	81001	39891	48917	39446	373	
	+	62	49087	33954	82460	07410	73018 880	
	—		3738	46911	36037	54706	38891 520	
41 45	.60605	78161	14956	22351	56328	12465	302	
	+	62	45348	87043	46422	52704	34127 360	
	—		3742	32155	85743	46651	11341 568	

c	Sine							
41 50'	.60668	23510	01999	68774	09032	46592	528	
	+	62	41606	54887	60679	06053	22785 792	
	—		3746	17169	50929	74460	13401 600	
41 55	.60730	65116	56887	29453	15085	69378	558	
	+	62	37860	37718	09749	31593	09384 192	
	—		3750	01952	07846	80484	96828 416	
41 60	.60793	02976	94605	39202	46678	78762	289	
	+	62	34110	35766	01902	51108	12555 776	
	—		3753	86503	32759	32511	28275 456	
41 65	.60855	37087	30371	41104	97786	91318	220	
	+	62	30356	49262	69143	18596	84280 320	
	—		3757	70823	01946	25223	00706 304	
41 70	.60917	67443	79634	10248	16383	75598	578	
	+	62	26598	78439	67196	93373	83574 016	
	—		3761	54910	91700	81665	56749 824	
41 75	.60979	94042	58073	77445	09757	59172	823	
	+	62	22837	23528	75496	11708	26824 192	
	—		3765	38766	78330	54708	23976 448	
41 80	.61042	16879	81602	52941	21465	85996	717	
	+	62	19071	84761	97165	57000	02847 744	
	—		3769	22390	38157	28505	61965 056	
41 85	.61104	35951	66364	50106	78465	88844	760	
	+	62	15302	62371	59008	28494	40882 688	
	—		3773	05781	47517	19958	21069 312	
41 90	.61166	51254	28736	09115	06960	29727	299	
	+	62	11529	56590	11491	08536	19813 376	
	—		3776	88939	82760	80172	12835 328	
41 95	.61228	62783	85326	20606	15496	49540	841	
	+	62	07752	67650	28730	28364	06978 048	
	—		3780	71865	20252	95917	91917 056	

c	Sine							
42 00'	.61290	70536	52976	49336	43860	56518	549	
	+	62	03971	95785	08477	32446	15060 992	
	—		3784	54557	36372	91088	49451 520	
42 05	.61352	74508	48761	57813	76306	71579	446	
	+	62	00187	41227	72104	41357	65609 472	
	—		3788	37016	07514	28156	17784 832	
42 10	.61414	74695	89989	29918	17664	37188	945	
	+	61	96399	04211	64590	13201	47824 640	
	—		3792	19241	10085	09628	86447 616	
42 15	.61476	71094	94200	94508	30865	85013	682	
	+	61	92606	84970	54505	03572	61377 024	
	—		3796	01232	20507	79505	29319 424	
42 20	.61538	63701	79171	49013	34438	46391	009	
	+	61	88810	83738	33997	24067	32057 600	
	—		3799	82989	15219	24729	42860 288	
42 25	.61600	52512	62909	83010	58505	78448	189	
	+	61	85011	00749	18777	99337	89197 312	
	—		3803	64511	70670	76643	95332 096	
42 30	.61662	37523	63659	01788	57843	67645	685	
	+	61	81207	36237	48107	22693	93865 216	
	—		3807	45799	63328	12442	86941 696	
42 35	.61724	18730	99896	49895	80537	61511	099	
	+	61	77399	90437	84779	10251	06923 520	
	—		3811	26852	69671	56623	20779 264	
42 40	.61785	96130	90334	34674	90788	68434	557	
	+	61	73588	63585	15107	53627	86144 256	
	—		3815	07670	66195	82435	84476 672	
42 45	.61847	69719	53919	49782	44416	54578	598	
	+	61	69773	55914	48911	71192	01667 584	
	—		3818	88253	29410	13335	42518 784	

c	Sine							
42 50'	.61909	39493	09833	98694	15608	56246	038	
	+	61	65954	67661	19501	57856	59148 800	
	—		3822	68600	35838	24429	39081 216	
42 55	.61971	05447	77495	18195	73465	15394	857	
	+	61	62131	99060	83663	33427	20067 584	
	—		3826	48711	62018	43926	11326 464	
42 60	.62032	67579	76556	01859	06892	35462	551	
	+	61	58305	50349	21644	89501	08741 120	
	—		3830	28586	84503	54582	13078 528	
42 65	.62094	25885	26905	23503	96393	44203	643	
	+	61	54475	21762	37141	34918	95662 592	
	—		3834	08225	79860	95148	48750 080	
42 70	.62155	80360	48667	60645	31312	39866	501	
	+	61	50641	13536	57280	39770	46912 512	
	—		3837	87628	24672	61816	17476 096	
42 75	.62217	31001	62204	17925	71082	86778	836	
	+	61	46803	25908	32607	77954	29436 416	
	—		3841	66793	95535	09660	67341 824	
42 80	.62278	77804	88112	50533	49037	16215	143	
	+	61	42961	59114	37072	68293	62094 592	
	—		3845	45722	69059	54085	59607 296	
42 85	.62340	20766	47226	87606	17330	78310	062	
	+	61	39116	13391	68013	14208	02487 296	
	—		3849	24414	21871	72265	42877 696	
42 90	.62401	59882	60618	55619	31538	80796	988	
	+	61	35266	88977	46141	41942	59609 600	
	—		3853	02868	30612	04587	37055 744	
42 95	.62462	95149	49596	01760	73481	40406	804	
	+	61	31413	86109	15529	37355	22553 856	
	—		3856	81084	71935	56092	27108 864	

c	Sine							
43 00'	.62524	26563	35705	17290	10836	62960	783	
	+	61	27557	05024	43593	81262	95444 992	
	—		3860	59063	22511	97914	66411 008	
43 05	.62585	54120	40729	60883	92099	58405	822	
	+	61	23696	45961	21081	83348	29033 984	
	—		3864	36803	59025	68721	89709 824	
43 10	.62646	77816	86690	81965	75447	87439	684	
	+	61	19832	09157	62056	14626	39324 160	
	—		3868	14305	58175	76152	35521 536	
43 15	.62707	97648	95848	44021	90074	26763	996	
	+	61	15963	94852	03880	38474	03802 624	
	—		3871	91568	96675	98252	77967 360	
43 20	.62769	13612	90700	47902	28548	30566	313	
	+	61	12092	03283	07204	40221	25835 264	
	—		3875	68593	51254	84914	67830 272	
43 25	.62830	25704	93983	55106	68769	56401	718	
	+	61	08216	34689	55949	55306	58004 992	
	—		3879	45378	98655	59309	82918 656	
43 30	.62891	33921	28673	11056	24076	14406	785	
	+	61	04336	89310	57293	95996	75086 336	
	—		3883	21925	15636	19324	87449 088	
43 35	.62952	38258	17983	68350	20072	89493	026	
	+	61	00453	67385	41657	76671	87637 248	
	—		3886	98231	78969	38995	00541 440	
43 40	.63013	38711	85369	10007	96744	77130	486	
	+	60	96566	69153	62688	37676	87095 808	
	—		3890	74298	65442	69936	73621 504	
43 45	.63074	35278	54522	72696	34421	64226	278	
	+	60	92675	94854	97245	67740	13474 304	
	—		3894	50125	51858	42779	76670 208	

c	Sine							
43 50'	.63135	27954	49377	69942	02161	77700	513	
	+	60	88781	44729	45387	24960	36804 096	
	—		3898	25712	15033	68597	93267 200	
43 55	.63196	16735	94107	15329	27122	14504	702	
	+	60	84883	19017	30353	56362	43536 896	
	—		3902	01058	31800	40339	24301 312	
43 60	.63257	01619	13124	45682	83484	58041	318	
	+	60	80981	17958	98553	16023	19235 584	
	—		3905	76163	79005	34255	00253 184	
43 65	.63317	82600	31083	44235	99507	77276	746	
	+	60	77075	41795	19547	81768	18982 400	
	—		3909	51028	33510	11328	02016 256	
43 70	.63378	59675	72878	63783	81275	96259	356	
	+	60	73165	90766	86037	70440	16966 144	
	—		3913	25651	72191	18699	90104 064	
43 75	.63439	32841	63645	49821	51716	13225	217	
	+	60	69252	65115	13846	51740	26862 080	
	—		3917	00033	71939	91097	42189 568	
43 80	.63500	02094	28760	63668	03456	40087	552	
	+	60	65335	65081	41906	60642	84672 512	
	—		3920	74174	09662	52257	98895 616	
43 85	.63560	67429	93842	05574	64099	24759	825	
	+	60	61414	90907	32244	08384	85776 896	
	—		3924	48072	62280	16354	17708 544	
43 90	.63621	28844	84749	37818	72484	10536	875	
	+	60	57490	42834	69963	92030	68068 352	
	—		3928	21729	06728	89417	34997 504	
43 95	.63681	86335	27584	07782	64514	78605	553	
	+	60	53562	21105	63235	02613	33070 848	
	—		3931	95143	19959	70760	35959 296	

c	Sine							
44 00'	.63742	39897	48689	71017	67128	11676	003	
	+	60	49630	25962	43275	31852	97111 552	
	—		3935	68314	78938	54399	32477 440	
44 05	.63802	89527	74652	14292	98981	08787	927	
	+	60	45694	57647	64336	77453	64634 112	
	—		3939	41243	60646	30474	48794 624	
44 10	.63863	35222	32299	78629	76434	73422	024	
	+	60	41755	16404	03690	46979	15839 488	
	—		3943	13929	42078	86670	14851 584	
44 15	.63923	76977	48703	82320	23413	89261	492	
	+	60	37812	02474	61611	60309	00987 904	
	—		3946	86372	00247	09633	67294 976	
44 20	.63984	14789	51178	43931	83722	90249	129	
	+	60	33865	16102	61364	50675	33692 928	
	—		3950	58571	12176	86393	58000 128	
44 25	.64044	48654	67281	05296	34398	23942	264	
	+	60	29914	57531	49187	64281	75692 800	
	—		3954	30526	54909	05776	70041 088	
44 30	.64104	78569	24812	54483	98679	99634	869	
	+	60	25960	27004	94278	58505	05651 712	
	—		3958	02238	05499	59824	41032 704	
44 35	.64165	04529	51817	48762	57185	05286	652	
	+	60	22002	24766	88778	98680	64619 008	
	—		3961	73705	41019	45207	93735 168	
44 40	.64225	26531	76584	37541	55865	69905	691	
	+	60	18040	51061	47759	53472	70883 840	
	—		3965	44928	38554	64642	73863 680	
44 45	.64285	44572	27645	85301	09338	40789	379	
	+	60	14075	06133	09204	88829	97020 160	
	—		3969	15906	75206	28301	94968 064	

c	Sine							
44 50'	.64345	58647	33778	94505	98168	37809	513	
	+	60	10105	90226	33998	60528	02052 096	
	—		3972	86640	28090	55228	90358 272	
44 55	.64405	68753	24005	28504	58696	39861	538	
	+	60	06133	03586	05908	05299	11693 824	
	—		3976	57128	74338	74748	71928 320	
44 60	.64465	74886	27591	34412	63995	51555	673	
	+	60	02156	46457	31569	30550	39765 504	
	—		3980	27371	91097	27878	95842 816	
44 65	.64525	77042	74048	65981	94545	91321	200	
	+	59	98176	19085	40472	02671	43922 688	
	—		3983	97369	55527	68739	34942 720	
44 70	.64585	75218	93134	06453	97217	35243	832	
	+	59	94192	21715	84944	33932	08979 968	
	—		3987	67121	44806	65960	57851 392	
44 75	.64645	69411	14849	91398	31149	44223	923	
	+	59	90204	54594	40137	67971	51128 576	
	—		3991	36627	36126	04092	14628 864	
44 80	.64705	59615	69444	31535	99120	95352	110	
	+	59	86213	17967	04011	63879	36499 712	
	—		3995	05887	06692	85009	28937 984	
44 85	.64765	45828	87411	35547	63000	31852	162	
	+	59	82218	12079	97318	78870	07561 728	
	—		3998	74900	33729	29318	96594 944	
44 90	.64825	28046	99491	32866	41870	39413	746	
	+	59	78219	37179	63589	49551	10966 784	
	—		4002	43666	94472	77764	90453 504	
44 95	.64885	06266	36670	96455	91421	50380	329	
	+	59	74216	93512	69116	71786	20513 280	
	—		4006	12186	66175	92631	71512 320	

c	Sine							
45 00'	.64944	80483	30183	65572	63207	70893	653	
	+	59	70210	81326	02940	79154	49000 960	
	—		4009	80459	26106	59148	06160 384	
45 05	.65004	50694	11509	68513	42362	19894	941	
	+	59	66201	00866	76834	20006	42840 576	
	—		4013	48484	51547	86888	89493 504	
45 10	.65064	16895	12376	45347	62368	62735	331	
	+	59	62187	52382	25286	33117	53347 072	
	—		4017	16262	19798	11176	74588 160	
45 15	.65123	79082	64758	70633	95486	16082	478	
	+	59	58170	36120	05488	21940	78758 912	
	—		4020	83792	08170	94482	07665 152	
45 20	.65183	37253	00878	76122	17426	94840	845	
	+	59	54149	52327	97317	27458	71093 760	
	—		4024	51073	93995	27822	69052 928	
45 25	.65242	91402	53206	73439	44885	65934	891	
	+	59	50125	01254	03321	99636	02040 832	
	—		4028	18107	54615	32162	19857 920	
45 30	.65302	41527	54460	76761	44521	67976	149	
	+	59	46096	83146	48706	67473	82182 912	
	—		4031	84892	67390	59807	54270 208	
45 35	.65361	87624	37607	25468	11995	50159	327	
	+	59	42064	98253	81316	07666	27912 704	
	—		4035	51429	09695	95805	57383 680	
45 40	.65421	29689	35861	06784	19661	78071	636	
	+	59	38029	46824	71620	11860	70529 024	
	—		4039	17716	58921	59338	68507 136	
45 45	.65480	67718	82685	78404	31522	48600	344	
	+	59	33990	29108	12698	52522	02021 888	
	—		4042	83754	92473	05119	49800 448	

c	Sine							
45 50'	.	65540	01709	11793	91102	84044	50622	809
	+	59	29947	45353	20225	47402	52221	440
	—		4046	49543	87771	24784	60232	704
45 55	.	65599	31656	57147	11328	31447	02843	871
	+	59	25900	95809	32454	22617	91988	736
	—		4050	15083	22252	48287	34696	448
45 60	.	65658	57557	52956	43782	54064	94832	485
	+	59	21850	80726	10201	74330	57292	288
	—		4053	80372	73368	45289	68257	536
45 65	.	65717	79408	33682	53984	28395	52125	026
	+	59	17797	00353	36833	29040	89034	752
	—		4057	45412	18586	26553	05423	872
45 70	.	65776	97205	34035	90817	57436	41159	502
	+	59	13739	54941	18247	02487	83610	880
	—		4061	10201	35388	45328	34331	648
45 75	.	65836	10944	88977	09064	59924	24770	371
	+	59	09678	44739	82858	57159	49279	232
	—		4064	74740	01272	98744	85819	392
45 80	.	65895	20623	33716	91923	17083	74049	520
	+	59	05613	69999	81585	58414	63459	840
	—		4068	39027	93753	29198	37223	936
45 85	.	65954	26237	03716	73508	75498	37510	083
	+	59	01545	30971	87832	29216	26235	904
	—		4072	03064	90358	25738	20903	424
45 90	.	66013	27782	34688	61341	04714	63745	510
	+	58	97473	27906	97474	03478	05332	480
	—		4075	66850	68632	25453	37308	160
45 95	.	66072	25255	62595	58815	08192	69077	795
	+	58	93397	61056	28841	78024	68024	320
	—		4079	30385	06135	14857	72597	248

c	Sine							
46 00'	.66131	18653	23651	87656	86217	37102	304	
	+	58	89318	30671	22706	63166	95427 072	
	—		4082	93667	80442	31274	20663 808	
46 05	.66190	07971	54323	10363	49384	32529	796	
	+	58	85235	37003	42264	31892	74763 264	
	—		4086	56698	69144	64218	09499 136	
46 10	.66248	93206	91326	52627	81277	07292	831	
	+	58	81148	80304	73119	67674	65264 128	
	—		4090	19477	49848	56779	31801 600	
46 15	.66307	74355	71631	25747	48951	72556	776	
	+	58	77058	60827	23271	10895	33462 528	
	—		4093	82004	00176	07003	79778 048	
46 20	.66366	51414	32458	49018	59847	06018	890	
	+	58	72964	78823	23095	03891	53684 480	
	—		4097	44277	97764	69273	83996 416	
46 25	.66425	24379	11281	72113	63738	59704	275	
	+	58	68867	34545	25330	34617	69688 064	
	—		4101	06299	20267	55687	56262 912	
46 30	.66483	93246	45826	97443	98356	29392	166	
	+	58	64766	28246	05062	78930	13425 152	
	—		4104	68067	45353	37437	36394 752	
46 35	.66542	58012	74073	02506	77286	42817	515	
	+	58	60661	60178	59709	41492	77030 400	
	—		4108	29582	50706	46187	42818 816	
46 40	.66601	18674	34251	62216	18779	19847	684	
	+	58	56553	30596	09002	95305	34211 584	
	—		4111	90844	14026	75450	26933 760	
46 45	.66659	75227	64847	71219	14084	54059	292	
	+	58	52441	39751	94976	19855	07277 824	
	—		4115	51852	13029	81962	31101 440	

c	Sine							
46 50'	.66718	27669	04599	66195	33939	61336	374	
	+	58	48325	87899	81946	37892	76176 384	
	—		4119	12606	25446	87058	50220 544	
46 55	.66776	75994	92499	48141	71832	37513	700	
	+	58	44206	75293	56499	50834	25955 840	
	—		4122	73106	29024	78045	96815 872	
46 60	.66835	20201	67793	04641	22666	63469	015	
	+	58	40084	02187	27474	72788	29139 968	
	—		4126	33352	01526	09576	69475 328	
46 65	.66893	60285	69980	32115	95454	92608	743	
	+	58	35957	68835	25948	63211	59664 640	
	—		4129	93343	20729	05019	24648 960	
46 70	.66951	96243	38815	58064	58666	52273	506	
	+	58	31827	75492	05219	58192	35015 680	
	—		4133	53079	64427	57829	51678 976	
46 75	.67010	28071	14307	63284	16858	87289	196	
	+	58	27694	22412	40792	00362	83336 704	
	—		4137	12561	10431	32920	50947 072	
46 80	.67068	55765	36720	04076	17221	70626	525	
	+	58	23557	09851	30360	67442	32389 632	
	—		4140	71787	36565	68031	15130 880	
46 85	.67126	79322	46571	34436	84664	03015	175	
	+	58	19416	38063	93794	99411	17258 752	
	—		4144	30758	20671	75094	13391 360	
46 90	.67184	98738	84635	28231	84075	20274	943	
	+	58	15272	07305	73123	24317	03867 392	
	—		4147	89473	40606	41602	78510 592	
46 95	.67243	14010	91941	01355	08392	24141	981	
	+	58	11124	17832	32516	82714	25356 800	
	—		4151	47932	74242	31976	96789 504	

c	Sine							
47 00'	.67301	25135	09773	33871	91106	49498	296	
	+	58	06972	69899	58274	50737	28567 296	
	—		4155	06135	99467	88928	00709 632	
47 05	.67359	32107	79672	92146	41843	78065	639	
	+	58	02817	63763	58806	61809	27857 664	
	—		4158	64082	94187	34822	64213 504	
47 10	.67417	34925	43436	50953	03653	05923	806	
	+	57	98658	99680	64619	26986	63644 160	
	—		4162	21773	36320	73046	00574 976	
47 15	.67475	33584	43117	15572	30639	69567	469	
	+	57	94496	77907	28298	53940	63069 184	
	—		4165	79207	03803	89363	62687 488	
47 20	.67533	28081	21024	43870	84580	32636	848	
	+	57	90330	98700	24494	64577	00381 696	
	—		4169	36383	74588	53282	45825 536	
47 25	.67591	18412	19724	68365	49157	33018	304	
	+	57	86161	62316	49906	11294	54556 160	
	—		4172	93303	26642	19410	92630 528	
47 30	.67649	04573	82041	18271	60451	87574	912	
	+	57	81988	69013	23263	91883	61925 632	
	—		4176	49965	37948	28818	00372 224	
47 35	.67706	86562	51054	41535	52335	49500	588	
	+	57	77812	19047	85315	63065	61553 408	
	—		4180	06369	86506	10391	30334 208	
47 40	.67764	64374	70102	26851	15401	11054	137	
	+	57	73632	12677	98809	52674	31219 200	
	—		4183	62516	50330	82194	19251 712	
47 45	.67822	38006	82780	25660	68075	42272	746	
	+	57	69448	50161	48478	70480	11967 488	
	—		4187	18405	07453	52821	92711 680	

c	Sine							
47 50'	.67880	07455	32941	74139	38555	54241	013	
	+	57	65261	31756	41025	17658	19255 808	
	—		4190	74035	35921	22756	80485 376	
47 55	.67937	72716	64698	15164	56213	73496	495	
	+	57	61070	57721	05103	94901	38770 432	
	—		4194	29407	13796	85722	33586 688	
47 60	.67995	33787	22419	20268	51115	12266	560	
	+	57	56876	28313	91307	09179	05183 744	
	—		4197	84520	19159	30036	43138 048	
47 65	.68052	90663	50733	11575	60294	17450	039	
	+	57	52678	43793	72147	79142	62045 696	
	—		4201	39374	30103	39963	60806 400	
47 70	.68110	43341	94526	83723	39436	79496	357	
	+	57	48477	04419	42044	39179	01239 296	
	—		4204	93969	24739	97066	20838 912	
47 75	.68167	91818	98946	25767	78615	80735	018	
	+	57	44272	10450	17304	42112	80400 384	
	—		4208	48304	81195	81554	63526 400	
47 80	.68225	36091	09396	43072	20728	61136	011	
	+	57	40063	62145	36108	60558	16873 984	
	—		4212	02380	77613	73636	60110 848	
47 85	.68282	76154	71541	79180	81286	78009	696	
	+	57	35851	59764	58494	86921	56763 136	
	—		4215	56196	92152	54865	38925 056	
47 90	.68340	12006	31306	37675	68208	34772	558	
	+	57	31636	03567	66342	32056	17838 080	
	—		4219	09753	02987	09487	12827 904	
47 95	.68397	43642	34874	04018	00264	52610	671	
	+	57	27416	93814	63355	22569	05010 176	
	—		4222	63048	88308	25787	07716 096	

c	Sine							
48 00'	.68454	71059	28688	67373	22833	57621	534	
	+	57	23194	30765	75046	96781	97294 080	
	—		4226	16084	26322	97434	92130 816	
48 05	.68511	94253	59454	42420	19615	54915	197	
	+	57	18968	14681	48723	99347	05163 264	
	—		4229	68858	95254	24829	07817 984	
48 10	.68569	13221	74135	91144	18962	60078	784	
	+	57	14738	45822	53469	74517	97345 280	
	—		4233	21372	73341	16440	01175 552	
48 15	.68626	27960	19958	44613	93480	57423	959	
	+	57	10505	24449	80128	58077	96169 728	
	—		4236	73625	38838	90152	55523 328	
48 20	.68683	38465	44408	24742	51558	53593	539	
	+	57	06268	50824	41289	67925	40646 400	
	—		4240	25616	70018	74607	24072 448	
48 25	.68740	44733	95232	66032	19483	94240	394	
	+	57	02028	25207	71270	93318	16573 952	
	—		4243	77346	45168	10540	63562 752	
48 30	.68797	46762	20440	37303	12802	10814	120	
	+	56	97784	47861	26102	82777	53011 200	
	—		4247	28814	42590	52124	68428 800	
48 35	.68854	44546	68301	63405	95579	63825	088	
	+	56	93537	19046	83512	30652	84582 400	
	—		4250	80020	40605	68305	05462 784	
48 40	.68911	38083	87348	46918	26232	48407	191	
	+	56	89286	39026	42906	62347	79119 616	
	—		4254	30964	17549	44138	48864 768	
48 45	.68968	27370	26374	89824	88580	27527	249	
	+	56	85032	08062	25357	18209	30254 848	
	—		4257	81645	51773	82129	15600 384	

c	Sine							
48 50'	.69025	12402	34437	15182	06789	57781	912	
	+	56	80774	26416	73583	36080	14654 464	
	—		4261	32064	21647	03564	00975 872	
48 55	.69081	93176	60853	88765	42869	72436	516	
	+	56	76512	94352	51936	32516	13678 592	
	—		4264	82220	05553	49847	14389 504	
48 60	.69138	69689	55206	40701	75385	86114	957	
	+	56	72248	12132	46382	82668	99289 088	
	—		4268	32112	81893	83833	15112 960	
48 65	.69195	41937	67338	87084	58054	85403	661	
	+	56	67979	80019	64488	98835	84176 128	
	—		4271	81742	29084	91159	48061 696	
48 70	.69252	09917	47358	51573	56890	69579	832	
	+	56	63707	98277	35404	07676	36114 432	
	—		4275	31108	25559	81577	79489 792	
48 75	.69308	73625	45635	86977	64567	05694	606	
	+	56	59432	67169	09844	26098	56624 640	
	—		4278	80210	49767	90284	32455 680	
48 80	.69365	33058	12804	96821	90665	62319	033	
	+	56	55153	86958	60076	35814	24168 960	
	—		4282	29048	80174	79249	22064 896	
48 85	.69421	88211	99763	56898	26479	86487	915	
	+	56	50871	57909	79901	56565	02104 064	
	—		4285	77622	95262	38544	90337 280	
48 90	.69478	39083	57673	36799	83044	88592	656	
	+	56	46585	80286	84639	18020	11766 784	
	—		4289	25932	73528	87673	40666 880	
48 95	.69534	85669	37960	21439	01065	00359	185	
	+	56	42296	54354	11110	30346	71099 904	
	—		4292	73977	93488	76892	71732 224	

c	Sine							
49 00'	.69591	27965	92314	32549	31411	71459	551	
	+	56	38003	80376	17621	53453	99367 680	
	—		4296	21758	33672	88542	10879 488	
49 05	.69647	65969	72690	50170	84865	70827	150	
	+	56	33707	58617	83948	64911	88488 192	
	—		4299	69273	72628	38366	46751 232	
49 10	.69703	99677	31308	34119	49777	59315	100	
	+	56	29407	89344	11320	26545	41736 960	
	—		4303	16523	88918	76839	61222 144	
49 15	.69760	29085	20652	45439	76323	01051	899	
	+	56	25104	72820	22401	49705	80514 816	
	—		4306	63508	61123	90486	60465 664	
49 20	.69816	54189	93472	67841	26028	81566	332	
	+	56	20798	09311	61277	59219	20049 152	
	—		4310	10227	67840	03205	05098 240	
49 25	.69872	74988	02784	29118	85248	01615	788	
	+	56	16487	99083	93437	56014	14950 912	
	—		4313	56680	87679	77585	39356 160	
49 30	.69928	91476	01868	22556	41262	16566	353	
	+	56	12174	42403	05757	78428	75594 752	
	—		4317	02867	99272	16230	19130 880	
49 35	.69985	03650	44271	28314	19690	92161	479	
	+	56	07857	39535	06485	62198	56463 872	
	—		4320	48788	81262	63072	38897 664	
49 40	.70041	11507	83806	34799	81889	48625	880	
	+	56	03536	90746	25222	99126	17566 208	
	—		4323	94443	12313	04692	57378 816	
49 45	.70097	15044	74552	60022	81015	66191	189	
	+	55	99212	96303	12909	94433	60187 392	
	—		4327	39830	71101	71635	21848 320	

c	Sine						
49 50'	.70153	14257	70855	72932	75449	26378	591
	+	55	94885	56472	41808	22798	38339 072
	—		4330	84951	36323	39723	91087 104
49 55	.70209	09143	27328	14740	98247	64717	869
	+	55	90554	71521	05484	83074	47251 968
	—		4334	29804	86689	31375	56804 608
49 60	.70264	99697	98849	20225	81322	11969	813
	+	55	86220	41716	18795	51698	90447 360
	—		4337	74391	00927	16913	63496 960
49 65	.70320	85918	40565	39021	33021	02417	760
	+	55	81882	67325	17868	34785	26950 400
	—		4341	18709	57781	15880	26690 560
49 70	.70376	67801	07890	56889	67806	29367	747
	+	55	77541	48615	60087	18905	00259 840
	—		4344	62760	36011	98347	49377 536
49 75	.70432	45342	56506	16976	86711	29627	302
	+	55	73196	85855	24075	20557	50882 304
	—		4348	06543	14396	86227	36729 088
49 80	.70488	18539	42361	41052	07268	80510	127
	+	55	68848	79312	09678	34330	14153 216
	—		4351	50057	71729	54581	08857 344
49 85	.70543	87388	21673	50730	41598	94662	831
	+	55	64497	29254	37948	79749	05295 872
	—		4354	93303	86820	32927	11589 888
49 90	.70599	51885	50927	88679	21347	99959	039
	+	55	60142	35950	51128	46821	93705 984
	—		4358	36281	38496	06548	25266 176
49 95	.70655	12027	86878	39807	68169	93664	956
	+	55	55783	99669	12632	40273	68439 808
	—		4361	78990	05600	17797	71296 768

c	Sine							
50 00'	.70710	67811	86547	52440	08443	62104	588	
	+	55	51422	20679	07032	22475	97143 040	
	—		4365	21429	66992	67404	16592 896	
50 05	.70766	19234	07226	59472	30919	59248	206	
	+	55	47056	99249	40039	55071	80550 144	
	—		4368	63600	01550	15775	75641 088	
50 10	.70821	66291	06475	99511	85991	39798	010	
	+	55	42688	35649	38489	39296	04909 056	
	—		4372	05500	88165	84303	10239 232	
50 15	.70877	08979	42125	38001	25287	44706	754	
	+	55	38316	30148	50323	54992	94669 824	
	—		4375	47132	05749	56661	26738 432	
50 20	.70932	47295	72273	88324	80280	39377	212	
	+	55	33940	83016	44573	98331	67931 392	
	—		4378	88493	33227	80110	70785 536	
50 25	.70987	81236	55290	32898	78612	07308	326	
	+	55	29561	94523	11346	18220	97145 856	
	—		4382	29584	49543	66797	19418 880	
50 30	.71043	10798	49813	44244	96833	04453	787	
	+	55	25179	64938	61802	51423	77726 976	
	—		4385	70405	33656	95050	70468 096	
50 35	.71098	35978	14752	06047	48256	82180	852	
	+	55	20793	94533	28145	56373	07258 880	
	—		4389	10955	64544	10683	29203 712	
50 40	.71153	56772	09285	34193	04629	89439	594	
	+	55	16404	83577	63601	45689	78055 168	
	—		4392	51235	21198	28285	92074 752	
50 45	.71208	73176	92862	97794	50319	67494	739	
	+	55	12012	32342	42403	17403	85980 416	
	—		4395	91243	82629	32524	27573 248	

c	Sine						
50 50'	.71263	85189	25205	40197	67723	53475	258
	+	55	07616	41098	59773	84879	168
	—		4399	30981	27863	79433	912
50 55	.71318	92805	66303	99971	52603	11882	466
	+	55	03217	10117	31910	05446	04384
	—		4402	70447	35944	97712	14290
50 60	.71373	96022	76421	31881	58049	16266	792
	+	54	98814	39669	95965	07733	90093
	—		4406	09641	85932	90014	47355
50 65	.71428	94837	16091	27846	65783	06359	890
	+	54	94408	30028	10032	17719	42737
	—		4409	48564	56904	34242	56528
50 70	.71483	89245	46119	37878	83502	49098	650
	+	54	89998	81463	53127	83476	86209
	—		4412	87215	27952	84836	74451
50 75	.71538	79244	27582	91006	66979	35308	181
	+	54	85585	94248	25174	98640	11757
	—		4416	25593	78188	74065	24581
50 80	.71593	64830	21831	16181	65619	47065	625
	+	54	81169	68654	46986	24574	87175
	—		4419	63699	86739	13312	79230
50 85	.71648	45999	90485	63167	90194	34240	772
	+	54	76750	04954	60247	11262	07944
	—		4423	01533	32747	94368	14001
50 90	.71703	22749	95440	23415	01456	42185	892
	+	54	72327	03421	27499	16893	93943
	—		4426	39093	95375	90710	58607
50 95	.71757	95076	98861	50914	18350	36129	393
	+	54	67900	64327	32123	26183	35336
	—		4429	76381	53800	58795	43902

c	Sine							
51 00'	.71812	62977	63188	83037	44533	71466	059	
	+	54	63470	87945	78322	67387	91434 240	
	—		4433	13395	87216	39338	45138 432	
51 05	.71867	26448	51134	61360	11921	62900	272	
	+	54	59037	74549	91106	28049	46295 808	
	—		4436	50136	74834	58599	21317 888	
51 10	.71921	85486	25684	52466	39971	09196	110	
	+	54	54601	24413	16271	69450	24977 920	
	—		4439	86603	95883	29663	50560 256	
51 15	.71976	40087	50097	68738	09421	34173	336	
	+	54	50161	37809	20388	39786	74417 664	
	—		4443	22797	29607	53724	61436 928	
51 20	.72030	90248	87906	89126	49208	08590	909	
	+	54	45718	15011	90780	86062	12980 736	
	—		4446	58716	55269	21363	60159 232	
51 25	.72085	35967	02918	79907	35270	21572	546	
	+	54	41271	56295	35511	64698	52821 504	
	—		4449	94361	52147	13828	53576 704	
51 30	.72139	77238	59214	15418	99968	74393	996	
	+	54	36821	61933	83364	50869	99244 800	
	—		4453	29731	99537	04312	67847 168	
51 35	.72194	14060	21147	98783	50838	73638	906	
	+	54	32368	32201	83827	46557	31397 632	
	—		4456	64827	76751	59231	62782 720	
51 40	.72248	46428	53349	82610	97396	05036	535	
	+	54	27911	67374	07075	87325	68614 912	
	—		4459	99648	63120	39499	41744 640	
51 45	.72302	74340	20723	89686	84721	73650	567	
	+	54	23451	67725	43955	47826	26870 272	
	—		4463	34194	37990	01803	56957 184	

c	Sine							
51 50'	.72356	97791	88449	33642	32548	00520	874	
	+	54	18988	33531	05965	46022	69913 088	
	—		4466	68464	80723	99879	10304 768	
51 55	.72411	16780	21980	39607	78570	70433	837	
	+	54	14521	65066	25241	46143	59608 320	
	—		4470	02459	70702	85781	49377 024	
51 60	.72465	31301	87046	64849	24714	30042	196	
	+	54	10051	62606	54538	60362	10231 296	
	—		4473	36178	87324	11158	58785 280	
51 65	.72519	41353	49653	19387	85076	40273	528	
	+	54	05578	26427	67214	49203	51446 016	
	—		4476	69622	10002	28521	46624 512	
51 70	.72573	46931	76080	86602	34279	91720	104	
	+	54	01101	56805	57212	20682	04821 504	
	—		4480	02789	18168	92514	26048 000	
51 75	.72627	48033	32886	43814	54961	96541	666	
	+	53	96621	54016	39043	28167	78773 504	
	—		4483	35679	91272	61182	91792 896	
51 80	.72681	44654	86902	82857	83129	75314	631	
	+	53	92138	18336	47770	66984	86980 608	
	—		4486	68294	08778	97242	91675 136	
51 85	.72735	36793	05239	30628	50114	62295	665	
	+	53	87651	50042	38991	69741	95305 472	
	—		4490	00631	50170	69345	92930 816	
51 90	.72789	24444	55281	69620	19856	57601	272	
	+	53	83161	49410	88821	00396	02374 656	
	—		4493	32691	94947	53345	43294 464	
51 95	.72843	07606	04692	58441	20252	59975	953	
	+	53	78668	16718	93873	47050	59080 192	
	—		4496	64475	22626	33561	26799 872	

c	Sine						
52 00'	.72896	86274	21411	52314	67303	19055	555
	+	53	74171	52243	71247	13489	32280
	—		4499	95981	12741	04043	14169
52 05	.72950	60445	73655	23561	80792	51336	662
	+	53	69671	56262	58506	09446	18110
	—		4503	27209	44842	69833	07782
52 10	.73004	30117	29917	82067	90238	69446	835
	+	53	65168	29053	13663	39613	10328
	—		4506	58159	98499	48226	81030
52 15	.73057	95285	58970	95731	29851	79775	668
	+	53	60661	70893	15163	91386	29298
	—		4509	88832	53296	70034	12114
52 20	.73111	55947	29864	10895	21238	09074	641
	+	53	56151	82060	61867	21352	17183
	—		4513	19226	88836	80838	12135
52 25	.73165	12099	11924	72762	42590	26257	508
	+	53	51638	62833	73030	40514	05047
	—		4516	49342	84739	42253	47355
52 30	.73218	63737	74758	45792	83104	31305	586
	+	53	47122	13490	88290	98260	57692
	—		4519	79180	20641	33183	55681
52 35	.73272	10859	88249	34083	81364	88997	773
	+	53	42602	34310	67649	65077	02010
	—		4523	08738	76196	51076	57163
52 40	.73325	53462	22560	01733	46441	91009	203
	+	53	38079	25571	91453	14000	44847
	—		4526	38018	31076	13180	58516
52 45	.73378	91541	48131	93186	60442	35855	463
	+	53	33552	87553	60377	00819	86330
	—		4529	67018	64968	57797	51512

c	Sine						
52 50'	.73432	25094	35685	53563	61262	22186	894
	+	53	29023	20534	95408	43022	34818 560
	—		4532	95739	57579	45536	05285 888
52 55	.73485	54117	56220	48972	04284	57004	608
	+	53	24490	24795	37828	97486	29532 672
	—		4536	24180	88631	60563	52305 152
52 60	.73538	78607	81015	86801	01770	86537	893
	+	53	19954	00614	49197	36922	77227 520
	—		4539	52342	37865	11856	68104 192
52 65	.73591	98561	81630	35998	38693	63764	910
	+	53	15414	48272	11332	25066	09123 328
	—		4542	80223	85037	34451	44578 048
52 70	.73645	13976	29902	47330	63759	72888	318
	+	53	10871	68048	26294	90614	64545 280
	—		4546	07825	09922	90691	56808 704
52 75	.73698	24847	97950	73625	54374	37434	101
	+	53	06325	60223	16371	99923	07736 576
	—		4549	35145	92313	71476	23367 680
52 80	.73751	31173	58173	89997	54297	45170	414
	+	53	01776	25077	24058	28446	84368 896
	—		4552	62186	12018	97506	59952 640
52 85	.73804	32949	83251	14055	82744	29539	475
	+	52	97223	62891	12039	30940	24416 256
	—		4555	88945	48865	20531	26368 256
52 90	.73857	30173	46142	26095	13684	53955	081
	+	52	92667	73945	63174	10408	98048 000
	—		4559	15423	82696	24590	66670 080
52 95	.73910	22841	20087	89269	24093	52003	847
	+	52	88108	58521	80477	85818	31377 920
	—		4562	41620	93373	27260	42519 552

c	Sine						
53 00'	.73963	10949	78609	69747	09911	83381	894
	+	52	83546	16900	87104	58557	88858 368
	—		4565	67536	60774	80893	59546 368
53 05	.74015	94495	95510	56851	68469	72239	673
	+	52	78980	49364	26329	77664	29312 000
	—		4568	93170	64796	73861	86729 472
53 10	.74068	73476	44874	83181	46134	01551	909
	+	52	74411	56193	61533	03802	42582 528
	—		4572	18522	85352	31795	68689 152
53 15	.74121	47888	01068	44714	49936	44134	679
	+	52	69839	37670	76180	72006	73893 376
	—		4575	43593	02372	18823	30825 728
53 20	.74174	17727	38739	20895	21943	18027	395
	+	52	65263	94077	73808	53183	43067 648
	—		4578	68380	95804	38808	77181 952
53 25	.74226	82991	32816	94703	75126	61095	824
	+	52	60685	25696	78004	14374	65885 696
	—		4581	92886	45614	36588	81037 312
53 30	.74279	43676	58513	72707	89501	26981	576
	+	52	56103	32810	32389	77785	84848 384
	—		4585	17109	31784	99208	68086 784
53 35	.74331	99779	91324	05097	67287	11829	095
	+	52	51518	15701	00604	78577	16761 600
	—		4588	41049	34316	57156	92138 496
53 40	.74384	51298	07025	05702	45864	28590	663
	+	52	46929	74651	66288	21420	24623 104
	—		4591	64706	33226	85599	03290 368
53 45	.74436	98227	81676	71990	67284	53214	331
	+	52	42338	09945	33061	35821	21332 736
	—		4594	88080	08551	05610	08496 640

c	Sine							
53 50'	.74489	40565	91622	05052	03105	74546	936	
	+	52	37743	21865	24510	30211	12836 096	
	—		4598	11170	40341	85406	24372 736	
53 55	.74541	78309	13487	29562	33316	87383	434	
	+	52	33145	10694	84168	44804	88463 360	
	—		4601	33977	08669	41575	22328 576	
53 60	.74594	11454	24182	13730	78121	75846	643	
	+	52	28543	76717	75499	03229	66134 784	
	—		4604	56499	93621	40305	65746 688	
53 65	.74646	39998	00899	89229	81351	41981	501	
	+	52	23939	20217	81877	62924	00388 096	
	—		4607	78738	75302	98615	39342 336	
53 70	.74698	63937	21117	71107	44275	42368	894	
	+	52	19331	41479	06574	64308	61045 760	
	—		4611	00693	33836	85578	70416 896	
53 75	.74750	83268	62596	77682	08584	03414	744	
	+	52	14720	40785	72737	78729	90628 864	
	—		4614	22363	49363	23552	42120 192	
53 80	.74802	97989	03382	50419	87313	94044	044	
	+	52	10106	18422	23374	55177	48508 672	
	—		4617	43749	02039	89400	98529 280	
53 85	.74855	08095	21804	73794	42491	42552	957	
	+	52	05488	74673	21334	65776	49979 392	
	—		4620	64849	72042	15720	41487 360	
53 90	.74907	13583	96477	95129	08267	92532	029	
	+	52	00868	09823	49292	50056	08492 032	
	—		4623	85665	39562	92061	19155 712	
53 95	.74959	14452	06301	44421	58324	01024	216	
	+	51	96244	24158	09729	57994	89336 320	
	—		4627	06195	84812	66150	06204 928	

c	Sine							
54 00'	.75011	10696	30459	54151	16318	90360	480	
	+	51	91617	17962	24916	91844	83131 392	
	—		4630	26440	88019	45110	75503 104	
54 05	.75063	02313	48421	79068	08163	73491	781	
	+	51	86986	91521	36897	46734	07628 288	
	—		4633	46400	29428	96683	61333 760	
54 10	.75114	89300	39943	15965	54897	81119	646	
	+	51	82353	45121	07468	50050	46294 528	
	—		4636	66073	89304	50444	13967 360	
54 15	.75166	71653	85064	23434	04948	27414	819	
	+	51	77716	79047	18163	99606	32327 168	
	—		4639	85461	47926	99020	45580 288	
54 20	.75218	49370	64111	41598	04554	59741	217	
	+	51	73076	93585	70237	00585	86746 880	
	—		4643	04562	85594	99309	67392 256	
54 25	.75270	22447	57697	11835	05140	46488	502	
	+	51	68433	89022	84642	01276	19354 624	
	—		4646	23377	82624	73693	18014 976	
54 30	.75321	90881	46719	96477	06416	65842	932	
	+	51	63787	65645	02017	27583	01339 648	
	—		4649	41906	19350	11250	82848 256	
54 35	.75373	54669	12364	98494	33999	67182	634	
	+	51	59138	23738	82667	16332	18491 392	
	—		4652	60147	76122	68974	04551 168	
54 40	.75425	13807	36103	81161	50331	85673	866	
	+	51	54485	63591	06544	47358	13940 224	
	—		4655	78102	33311	72977	84388 608	
54 45	.75476	68292	99694	87705	97689	99614	911	
	+	51	49829	85488	73232	74380	29551 616	
	—		4658	95769	71304	19711	74555 648	

c	Sine							
54 50'	.75528	18122	85183	60938	72070	29165	840	
	+	51	45170	89719	01928	54668	54995 968	
	—		4662	13149	70504	77169	61157 120	
54 55	.75579	63293	74902	62867	26738	84162	388	
	+	51	40508	76569	31423	77498	93838 848	
	—		4665	30242	11335	86098	38052 352	
54 60	.75631	03802	51471	94291	04237	78000	973	
	+	51	35843	46327	20087	91400	55786 496	
	—		4668	47046	74237	61205	71254 784	
54 65	.75682	39645	97799	14378	95638	33787	083	
	+	51	31174	99280	45850	30194	84531 712	
	—		4671	63563	39667	92366	53920 256	
54 70	.75733	70820	97079	60229	25833	18318	722	
	+	51	26503	35717	06182	37828	30611 456	
	—		4674	79791	88102	45828	51873 792	
54 75	.75784	97324	32796	66411	63661	48930	320	
	+	51	21828	55925	18079	91999	78737 664	
	—		4677	95732	00034	65416	39516 160	
54 80	.75836	19152	88721	84491	55661	27668	235	
	+	51	17150	60193	18045	26583	39221 504	
	—		4681	11383	55975	73735	26099 968	
54 85	.75887	36303	48915	02536	82244	66889	916	
	+	51	12469	48809	62069	52848	13121 536	
	—		4684	26746	36454	73372	72273 920	
54 90	.75938	48772	97724	64606	35092	80011	502	
	+	51	07785	22063	25614	79475	40847 616	
	—		4687	41820	22018	48099	96861 440	
54 95	.75989	56558	19787	90221	14568	20858	402	
	+	51	03097	80243	03596	31375	43986 176	
	—		4690	56604	93231	64071	73687 296	

c	Sine							
55 00'	.76040	59656	00030	93817	45943	64844	995	
	+	50	98407	23638	10364	67303	70298 880	
	—		4693	71100	30676	71025	18569 984	
55 05	.76091	58063	23669	04182	13247	35143	615	
	+	50	93713	52537	79687	96278	51728 896	
	—		4696	85306	14954	03477	66184 960	
55 10	.76142	51776	76206	83870	09525	86872	452	
	+	50	89016	67231	64733	92800	85543 936	
	—		4699	99222	26681	81923	36919 552	
55 15	.76193	40793	43438	48604	02326	72416	669	
	+	50	84316	68009	38052	10877	48624 384	
	—		4703	12848	46496	14028	93493 248	
55 20	.76244	25110	11447	86656	13204	21040	837	
	+	50	79613	55160	91555	96848	55131 136	
	—		4706	26184	55050	95827	87381 248	
55 25	.76295	04723	66608	78212	10052	76172	753	
	+	50	74907	28976	36505	01020	67749 888	
	—		4709	39230	33018	12913	94917 376	
55 30	.76345	79630	95585	14717	11073	43922	081	
	+	50	70197	89746	03486	88106	72832 512	
	—		4712	51985	61087	41633	42967 808	
55 35	.76396	49828	85331	18203	99180	16754	966	
	+	50	65485	37760	42399	46473	29864 704	
	—		4715	64450	19966	50276	24199 168	
55 40	.76447	15314	23091	60603	45653	46619	214	
	+	50	60769	73310	22432	96197	05665 536	
	—		4718	76623	90381	00266	01775 104	
55 45	.76497	76083	96401	83036	41850	52285	164	
	+	50	56050	96686	32051	95931	03890 432	
	—		4721	88506	53074	47349	03449 600	

c	Sine							
55 50'	.76548	32134	93088	15088	37781	56175	732	
	+	50	51329	08179	78977	48582	00440 832	
	—		4725	00097	88808	42782	04976 128	
55 55	.76598	83464	01267	94065	86363	56615	777	
	+	50	46604	08081	90169	05799	95464 704	
	—		4728	11397	78362	34519	02774 272	
55 60	.76649	30068	09349	84234	92163	52081	324	
	+	50	41875	96684	11806	71280	92690 432	
	—		4731	22406	02533	68396	75750 400	
55 65	.76699	71944	06033	96041	63444	44771	804	
	+	50	37144	74278	09273	02884	16940 032	
	—		4734	33122	42137	89319	36220 160	
55 70	.76750	09088	80312	05314	66328	61711	594	
	+	50	32410	41155	67135	13564	80719 872	
	—		4737	43546	78008	42441	69871 360	
55 75	.76800	41499	21467	72449	79893	42430	736	
	+	50	27672	97608	89126	71123	10848 512	
	—		4740	53678	90996	74351	64640 256	
55 80	.76850	69172	19076	61576	51016	53279	287	
	+	50	22932	43929	98129	96771	46208 256	
	—		4743	63518	61972	34251	28511 488	
55 85	.76900	92104	63006	59706	47787	99487	978	
	+	50	18188	80411	36157	62520	17696 768	
	—		4746	73065	71822	75136	96105 472	
55 90	.76951	10293	43417	95864	10308	17184	683	
	+	50	13442	07345	64334	87383	21591 296	
	—		4749	82320	01453	54978	23971 328	
55 95	.77001	23735	50763	60198	97691	38776	431	
	+	50	08692	25025	62881	32404	97619 968	
	—		4752	91281	31788	37895	74597 632	

c	Sine							
56 00'	.77051	32427	75789	23080	30096	36396	013	
	+	50	03939	33744	31092	94509	23022 336	
	—		4755	99949	43768	95337	88948 480	
56 05	.77101	36367	09533	54173	24605	59418	155	
	+	49	99183	33794	87323	99171	34073 856	
	—		4759	08324	18355	07256	47563 776	
56 10	.77151	35550	43328	41497	23776	93492	608	
	+	49	94424	25470	68968	91914	86510 080	
	—		4762	16405	36524	63281	20079 360	
56 15	.77201	29974	68799	10466	15691	80002	808	
	+	49	89662	09065	32444	28633	66430 720	
	—		4765	24192	79273	63893	03105 536	
56 20	.77251	19636	77864	42910	44325	46432	893	
	+	49	84896	84872	53170	64740	63325 184	
	—		4768	31686	27616	21596	46440 448	
56 25	.77301	04533	62736	96081	09066	09758	351	
	+	49	80128	53186	25554	43144	16884 736	
	—		4771	38885	62584	62090	67469 824	
56 30	.77350	84662	15923	21635	52210	26642	777	
	+	49	75357	14300	62969	81053	49414 912	
	—		4774	45790	65229	25439	53731 584	
56 35	.77400	60019	30223	84605	33263	76057	668	
	+	49	70582	68509	97740	55613	95683 328	
	—		4777	52401	16618	67240	53590 016	
56 40	.77450	30601	98733	82345	88877	71741	130	
	+	49	65805	16108	81121	88373	42093 312	
	—		4780	58716	97839	59792	54868 992	
56 45	.77499	96407	14842	63467	77251	13834	151	
	+	49	61024	57391	83282	28580	87224 320	
	—		4783	64737	89996	93262	51452 416	

c	Sine							
56 50'	.77549	57431	72234	46750	05832	01059	263	
	+	49	56240	92653	93285	35318	35771 904	
	—		4786	70463	74213	76850	97760 768	
56 55	.77599	13672	64888	40035	41150	36830	935	
	+	49	51454	22190	19071	58467	38011 136	
	—		4789	75894	31631	39956	50982 912	
56 60	.77648	65126	87078	59106	99617	74841	802	
	+	49	46664	46295	87440	18510	87028 224	
	—		4792	81029	43409	33339	01061 120	
56 65	.77698	11791	33374	46547	18128	61870	062	
	+	49	41871	65266	44030	85171	85967 104	
	—		4795	85868	90725	30281	88308 480	
56 70	.77747	53662	98640	90578	03300	47837	506	
	+	49	37075	79397	53305	54889	97658 624	
	—		4798	90412	54775	27753	08626 944	
56 75	.77796	90738	78038	43883	58190	45495	585	
	+	49	32276	88984	98530	27136	89031 680	
	—		4801	94660	16773	47565	06182 656	
56 80	.77846	23015	67023	42413	85327	34527	302	
	+	49	27474	94324	81756	79571	82849 024	
	—		4804	98611	57952	37533	53571 328	
56 85	.77895	50490	61348	24170	64899	17376	550	
	+	49	22669	95713	23804	42038	29277 696	
	—		4808	02266	59562	72635	19326 208	
56 90	.77944	73160	57061	47975	06937	46654	688	
	+	49	17861	93446	64241	69403	09951 488	
	—		4811	05625	02873	56164	22692 864	
56 95	.77993	91022	50508	12216	76340	56605	297	
	+	49	13050	87821	61368	13238	87258 624	
	—		4814	08686	69172	20887	75650 304	

c	Sine							
57 00'	.78043	04073	38329	73584	89579	43863	915	
	+	49	08236	79134	92195	92351	11608 320	
	—		4817	11451	39764	30200	12101 632	
57 05	.78092	12310	17464	65780	81930	55472	241	
	+	49	03419	67683	52431	62150	99506 688	
	—		4820	13918	95973	79276	04077 568	
57 10	.78141	15729	85148	18212	44081	54978	889	
	+	48	98599	53764	56457	82874	95429 120	
	—		4823	16089	19142	96222	65007 104	
57 15	.78190	14329	38912	74670	26956	50408	664	
	+	48	93776	37675	37314	86652	30422 016	
	—		4826	17961	90632	43230	39911 936	
57 20	.78239	08105	76588	11985	13608	80830	640	
	+	48	88950	19713	46682	43421	90510 080	
	—		4829	19536	91821	17722	82428 416	
57 25	.78287	97055	96301	58667	57030	71340	914	
	+	48	84121	00176	54861	25699	08081 664	
	—		4832	20814	04106	53505	18670 336	
57 30	.78336	81176	96478	13528	82729	79422	213	
	+	48	79288	79362	50754	72193	89411 328	
	—		4835	21793	08904	21911	97793 280	
57 35	.78385	60465	75840	64283	54923	68833	038	
	+	48	74453	57569	41850	50281	91618 048	
	—		4838	22473	87648	32953	29197 056	
57 40	.78434	34919	33410	06134	05205	60451	555	
	+	48	69615	35095	54202	17328	62420 992	
	—		4841	22856	21791	36460	06345 728	
57 45	.78483	04534	68505	60336	22534	22872	977	
	+	48	64774	12239	32410	80868	56075 264	
	—		4844	22939	92804	23228	17061 888	

c	Sine							
57 50'	.78531	69308	80744	92747	03402	78947	643	
	+	48	59929	89299	39606	57640	39013	376
	—		4847	22724	82176	26161	40278	784
57 55	.78580	29238	70044	32353	61043	17960	975	
	+	48	55082	66574	57430	31478	98734	592
	—		4850	22210	71415	21413	29164	288
57 60	.78628	84321	36618	89783	92522	16695	625	
	+	48	50232	44363	86015	10065	69570	304
	—		4853	21397	42047	29527	80529	664
57 65	.78677	34553	80982	75799	02587	86265	766	
	+	48	45379	22966	43967	80537	89040	640
	—		4856	20284	75617	16578	90491	392
57 70	.78725	79933	03949	19766	83125	75307	251	
	+	48	40523	02681	68350	63958	98549	248
	—		4859	18872	53687	95308	96259	072
57 75	.78774	20456	06630	88117	47084	73855	598	
	+	48	35663	83809	14662	68650	02290	176
	—		4862	17160	57841	26266	04038	144
57 80	.78822	56119	90440	02780	15734	76145	803	
	+	48	30801	66648	56821	42383	98252	032
	—		4865	15148	69677	18940	02939	904
57 85	.78870	86921	57088	59601	58118	74398	230	
	+	48	25936	51499	87144	23443	95312	128
	—		4868	12836	70814	32897	64843	520
57 90	.78919	12858	08588	46745	81562	69710	742	
	+	48	21068	38663	16329	90546	30468	608
	—		4871	10224	42889	78916	30128	128
57 95	.78967	33926	47251	63075	72109	00178	628	
	+	48	16197	28438	73440	11630	00340	480
	—		4874	07311	67559	20116	79220	736

c	Sine							
58 00'	.79015	50123	75690	36515	83739	00519	208	
	+	48	11323	21127	05880	91513	21119 744	
	—		4877	04098	26496	73094	89881 088	
58 05	.79063	61446	96817	42396	75252	21638	752	
	+	48	06446	17028	79384	18418	31238 656	
	—		4880	00584	01395	09051	80146 688	
58 10	.79111	67893	13846	21780	93670	52878	211	
	+	48	01566	16444	77989	09366	51091 968	
	—		4882	96768	73965	54923	36900 096	
58 15	.79159	69459	30290	99770	03037	03969	958	
	+	47	96683	19676	04023	54443	14191 872	
	—		4885	92652	25937	94508	29927 424	
58 20	.79207	66142	49967	03793	57480	18161	986	
	+	47	91797	27023	78085	59934	84264 448	
	—		4888	88234	39060	69595	11469 056	
58 25	.79255	57939	76990	81879	17415	02426	591	
	+	47	86908	38789	39024	90339	72795 392	
	—		4891	83514	95100	81088	01146 880	
58 30	.79303	44848	15780	20904	07754	75221	852	
	+	47	82016	55274	43924	09251	71648 512	
	—		4894	78493	75843	90131	56216 832	
58 35	.79351	26864	71054	64828	17006	46869	656	
	+	47	77121	76780	68080	19120	15431 680	
	—		4897	73170	63094	19234	27056 640	
58 40	.79399	03986	47835	32908	36126	62301	790	
	+	47	72224	03610	04985	99885	88375 040	
	—		4900	67545	38674	53390	97858 048	
58 45	.79446	76210	51445	37894	36012	50676	476	
	+	47	67323	36064	66311	46494	90516 992	
	—		4903	61617	84426	41204	12428 288	

c	Sine							
58 50'	.79494	43533	87510	04205	82507	41193	538	
	+	47	62419	74446	81885	05290	78088 704	
	—		4906	55387	82209	96003	85005 568	
58 55	.79542	05953	61956	86090	87798	19282	678	
	+	47	57513	19058	99675	09286	93083 136	
	—		4909	48855	13903	96966	96089 600	
58 60	.79589	63466	81015	85765	97085	12365	564	
	+	47	52603	70203	85771	12319	96993 536	
	—		4912	42019	61405	90234	73156 096	
58 65	.79637	16070	51219	71537	09405	09359	379	
	+	47	47691	28184	24365	22085	23837 440	
	—		4915	34881	06631	90029	56200 960	
58 70	.79684	63761	79403	95902	31490	33196	181	
	+	47	42775	93303	17733	32055	67636 480	
	—		4918	27439	31516	79770	48067 072	
58 75	.79732	06537	72707	13635	63546	00832	889	
	+	47	37857	65863	86216	52285	19569 408	
	—		4921	19694	18014	13187	49473 792	
58 80	.79779	44395	38570	99852	15831	20402	017	
	+	47	32936	46169	68202	39097	70095 616	
	—		4924	11645	48096	15434	78635 520	
58 85	.79826	77331	84740	68054	54928	90498	120	
	+	47	28012	34524	20106	23662	91460 096	
	—		4927	03293	03753	84202	75515 392	
58 90	.79874	05344	19264	88160	78591	81957	958	
	+	47	23085	31231	16352	39460	15944 704	
	—		4929	94636	66996	90828	90487 808	
58 95	.79921	28429	50496	04513	18051	97902	736	
	+	47	18155	36594	49355	48631	25456 896	
	—		4932	85676	19853	81407	57486 592	

c	Sine							
59 00'	.79968	46584	87090	53868	66683	23359	942	
	+	47	13222	50918	29501	67223	67970 304	
	—		4935	76411	44371	77898	51490 304	
59 05	.80015	59807	38008	83370	33906	91329	946	
	+	47	08286	74506	85129	89325	16480 000	
	—		4938	66842	22616	79234	30269 952	
59 10	.80062	68094	12515	68500	23232	07810	306	
	+	47	03348	07664	62513	10090	86210 048	
	—		4941	56968	36673	62426	60408 320	
59 15	.80109	71442	20180	31013	33322	94020	570	
	+	46	98406	50696	25839	47664	25801 728	
	—		4944	46789	68645	83671	27409 664	
59 20	.80156	69848	70876	56852	80987	19822	289	
	+	46	93462	03906	57193	63992	98392 064	
	—		4947	36306	00655	79452	29944 832	
59 25	.80203	63310	74783	14046	44980	18213	408	
	+	46	88514	67600	56537	84540	68447 232	
	—		4950	25517	14844	67644	58065 920	
59 30	.80250	51825	42383	70584	29520	86661	458	
	+	46	83564	42083	41693	16896	10381 312	
	—		4953	14422	93372	48615	55410 944	
59 35	.80297	35389	84467	12277	46416	97042	746	
	+	46	78611	27660	48320	68280	54970 368	
	—		4956	03023	18418	06325	65243 904	
59 40	.80344	14001	12127	60598	14697	52012	747	
	+	46	73655	24637	29902	61954	89726 464	
	—		4958	91317	72179	09427	60344 576	
59 45	.80390	87656	36764	90500	76652	41739	036	
	+	46	68696	33319	57723	52527	29381 888	
	—		4961	79306	36872	12364	56602 624	

c	Sine							
59 50'	.80437	56352	70084	48224	29179	71120	983	
	+	46	63734	54013	20851	40162	72779 264	
	—		4964	66988	94732	56467	10327 296	
59 55	.80484	20087	24097	69075	69342	43900	128	
	+	46	58769	87024	26118	83695	62451 968	
	—		4967	54365	28014	71048	99124 224	
59 60	.80530	78857	11121	95194	53038	06352	704	
	+	46	53802	32658	98104	12646	63327 744	
	—		4970	41435	18991	74501	86353 664	
59 65	.80577	32659	43780	93298	65684	69680	597	
	+	46	48831	91223	79112	38144	76974 080	
	—		4973	28198	49955	75388	69008 384	
59 70	.80623	81491	35004	72411	03829	46654	501	
	+	46	43858	63025	29156	62756	07965 696	
	—		4976	14655	03217	73536	09063 424	
59 75	.80670	25349	98030	01567	66585	54619	569	
	+	46	38882	48370	25938	89219	98902 272	
	—		4979	00804	61107	61125	48087 808	
59 80	.80716	64232	46400	27506	55805	53522	539	
	+	46	33903	47565	64831	28094	50814 464	
	—		4981	86647	05974	23783	05201 152	
59 85	.80762	98135	93965	92337	83900	04336	837	
	+	46	28921	60918	58857	04311	45613 312	
	—		4984	72182	20185	41668	58163 200	
59 90	.80809	27057	54884	51194	88211	49949	621	
	+	46	23936	88736	38671	62642	87450 112	
	—		4987	57409	86127	90563	07666 944	
59 95	.80855	50994	43620	89866	50854	37399	571	
	+	46	18949	31326	52543	72079	79783 168	
	—		4990	42329	86207	42955	24628 480	

c	Sine							
60 00'	.80901	69943	74947	42410	22934	17182	895	
	+	46	13958	88996	66336	29124	55154	688
	—		4993	26942	02848	69126	80550	400
60 05	.80947	83902	63944	08746	52058	72337	866	
	+	46	08965	62054	63487	59997	74604	288
	—		4996	11246	18495	38236	60764	160
60 10	.80993	92868	25998	72234	12056	46942	364	
	+	46	03969	50808	44992	21761	13840	128
	—		4998	95242	15610	19403	60566	784
60 15	.81039	96837	76807	17226	33817	60782	654	
	+	45	98970	55566	29382	02357	53273	344
	—		5001	78929	76674	82788	64152	576
60 20	.81085	95808	32373	46608	36175	14055	657	
	+	45	93968	76636	52707	19568	89120	768
	—		5004	62308	84190	00675	06283	520
60 25	.81131	89777	09009	99315	55744	03176	746	
	+	45	88964	14327	68517	18893	82837	248
	—		5007	45379	20675	48548	16621	568
60 30	.81177	78741	23337	67832	74637	86013	445	
	+	45	83956	68948	47841	70345	66215	680
	—		5010	28140	68670	06173	46650	112
60 35	.81223	62697	92286	15674	44983	52229	027	
	+	45	78946	40807	79171	64172	19565	568
	—		5013	10593	10731	58673	79166	208
60 40	.81269	41644	33093	94846	09155	71795	377	
	+	45	73933	30214	68440	05498	40399	360
	—		5015	92736	29436	97605	20204	288
60 45	.81315	15577	63308	63286	14654	12194	319	
	+	45	68917	37478	39003	07893	20195	072
	—		5018	74570	07382	22031	73370	880

c	Sine							
60 50'	.81360	84495	00787	02289	22547	32388	948	
	+	45	63898	62908	31620	85861	46824 192	
	—		5021	56094	27182	39598	96530 944	
60 55	.81406	48393	63695	33910	08408	79213	623	
	+	45	58877	06814	04438	46262	50293 248	
	—		5024	37308	71471	67606	40736 256	
60 60	.81452	07270	70509	38348	54671	29507	232	
	+	45	53852	69505	32966	78656	09556 992	
	—		5027	18213	22903	34078	71396 864	
60 65	.81497	61123	40014	71315	33327	39063	644	
	+	45	48825	51292	10063	44577	38160 128	
	—		5029	98807	64149	78835	71518 464	
60 70	.81543	09948	91306	81378	77904	77224	198	
	+	45	43795	52484	45913	65741	66641 664	
	—		5032	79091	77902	54561	27121 408	
60 75	.81588	53744	43791	27292	43646	43865	443	
	+	45	38762	73392	68011	11180	39520 256	
	—		5035	59065	46872	27870	94529 024	
60 80	.81633	92507	17183	95303	54826	83385	652	
	+	45	33727	14327	21138	83309	44991 232	
	—		5038	38728	53788	80378	49720 832	
60 85	.81679	26234	31511	16442	38136	28376	650	
	+	45	28688	75598	67350	02930	95270 400	
	—		5041	18080	81401	09761	19474 176	
60 90	.81724	54923	07109	83792	41067	23647	940	
	+	45	23647	57517	85948	93169	75796 224	
	—		5043	97122	12477	30823	94355 712	
60 95	.81769	78570	64627	69741	34236	99443	867	
	+	45	18603	60395	73471	62345	81440 512	
	—		5046	75852	29804	76562	23432 704	

c	Sine							
61 00'	.81814	97174	25023	43212	96582	80884	028	
	+	45	13556	84543	43666	85783	58007 808	
	—		5049	54271	16189	99223	90677 504	
61 05	.81860	10731	09566	86879	82366	38891	645	
	+	45	08507	30272	27476	86559	67330 304	
	—		5052	32378	54458	71369	72973 056	
61 10	.81905	19238	39839	14356	68926	06222	683	
	+	45	03454	97893	73018	15189	94357 248	
	—		5055	10174	27455	86932	79666 176	
61 15	.81950	22693	37732	87374	84116	00579	397	
	+	44	98399	87719	45562	28257	14691 072	
	—		5057	87658	18045	62276	73601 024	
61 20	.81995	21093	25452	32937	12373	15271	088	
	+	44	93342	00061	27516	65980	41090 048	
	—		5060	64830	09111	37252	73568 256	
61 25	.82040	14435	25513	60453	78353	56360	624	
	+	44	88281	35231	18405	28727	67521 792	
	—		5063	41689	83555	76255	38100 224	
61 30	.82085	02716	60744	78859	07081	23882	416	
	+	44	83217	93541	34849	52472	29421 568	
	—		5066	18237	24300	69277	30556 928	
61 35	.82129	85934	54286	13708	59553	53303	761	
	+	44	78151	75304	10548	83194	98864 640	
	—		5068	94472	14287	32962	65426 944	
61 40	.82174	64086	29590	24257	42748	52168	488	
	+	44	73082	80831	96261	50232	33437 696	
	—		5071	70394	36476	11659	35778 816	
61 45	.82219	37169	10422	20518	92980	85606	659	
	+	44	68011	10437	59785	38572	97658 880	
	—		5074	46003	73846	78470	21820 928	

c	Sine							
61 50'	.82264	05180	20859	80304	31553	83265	190	
	+	44	62936	64433	85938	60102	75837 952	
	—		5077	21300	09398	36302	80448 000	
61 55	.82308	68116	85293	66242	91656	59103	461	
	+	44	57859	43133	76540	23799	95389 952	
	—		5079	96283	26149	18918	15801 856	
61 60	.82353	25976	28427	42783	15456	54492	943	
	+	44	52779	46850	50391	04881	79588 096	
	—		5082	70953	07136	91978	30666 240	
61 65	.82397	78755	75277	93174	20338	34080	818	
	+	44	47696	75897	43254	12903	48921 856	
	—		5085	45309	35418	54092	58754 048	
61 70	.82442	26452	51175	36428	33241	83002	667	
	+	44	42611	30588	07835	58810	90167 808	
	—		5088	19351	94070	37862	77695 488	
61 75	.82486	69063	81763	44263	92052	73170	974	
	+	44	37523	11236	13765	20948	12472 320	
	—		5090	93080	66188	10927	02798 848	
61 80	.82531	06586	92999	58029	13000	85643	532	
	+	44	32432	18155	47577	10021	09673 472	
	—		5093	66495	34886	77002	61385 216	
61 85	.82575	39019	11155	05606	23021	95316	887	
	+	44	27338	51660	12690	33018	48288 256	
	—		5096	39595	83300	76927	47728 896	
61 90	.82619	66357	62815	18296	56040	43605	389	
	+	44	22242	12064	29389	56091	00559 360	
	—		5099	12381	94583	89700	58508 288	
61 95	.82663	88599	74879	47686	12131	44164	399	
	+	44	17142	99682	34805	66390	42051 072	
	—		5101	84853	51909	33521	08687 360	

c	Sine							
62 00'	.82708	05742	74561	82491	78521	86215	298	
	+	44	12041	14828	82896	32869	33363 712	
	—		5104	57010	38469	66826	27779 584	
62 05	.82752	17783	89390	65388	11391	19579	363	
	+	44	06936	57818	44426	66043	05584 128	
	—		5107	28852	37476	89328	36443 136	
62 10	.82796	24720	47209	09814	77434	25163	136	
	+	44	01829	28966	06949	76714	69140 992	
	—		5110	00379	32162	43050	03307 008	
62 15	.82840	26549	76175	16764	54148	94304	123	
	+	43	96719	28586	74787	33664	65833 984	
	—		5112	71591	05777	13358	81995 264	
62 20	.82884	23269	04761	91551	87813	60138	699	
	+	43	91606	56995	69010	20305	83838 720	
	—		5115	42487	41591	30000	28299 264	
62 25	.82928	14875	61757	60562	08119	43976	570	
	+	43	86491	14508	27418	90305	55539 456	
	—		5118	13068	22894	68129	97346 304	
62 30	.82972	01366	76265	87980	98424	99516	150	
	+	43	81373	01440	04524	22175	58193 152	
	—		5120	83333	32996	49344	20851 712	
62 35	.83015	82739	77705	92505	20600	57709	974	
	+	43	76252	18106	71527	72831	37341 440	
	—		5123	53282	55225	42709	64238 336	
62 40	.83059	58991	95812	64032	93431	95050	501	
	+	43	71128	64824	16302	30121	73103 104	
	—		5126	22915	72929	65791	63638 784	
62 45	.83103	30120	60636	80335	23553	68153	927	
	+	43	66002	41908	43372	64330	09464 320	
	—		5128	92232	69476	85681	42749 696	

c	Sine							
62 50'	.83146	96123	02545	23707	87883	77618	163	
	+	43	60873	49675	73895	78648	66714 624	
	—		5131	61233	28254	20022	09352 704	
62 55	.83190	56996	52220	97603	66532	44333	018	
	+	43	55741	88442	45641	58626	57361 920	
	—		5134	29917	32668	38033	31582 976	
62 60	.83234	12738	40663	43245	25159	01695	118	
	+	43	50607	58525	12973	20593	25778 944	
	—		5136	98284	66145	61534	93792 768	
62 65	.83277	63345	99188	56218	45752	27473	461	
	+	43	45470	60240	46827	59058	31986 176	
	—		5139	66335	12131	65969	31935 232	
62 70	.83321	08816	59429	03046	04810	59459	596	
	+	43	40330	93905	34695	93089	00050 944	
	—		5142	34068	54091	81422	48501 248	
62 75	.83364	49147	53334	37741	97899	59511	233	
	+	43	35188	59836	80604	11666	51549 696	
	—		5145	01484	75510	93644	06835 200	
62 80	.83407	84336	13171	18346	09566	11060	326	
	+	43	30043	58352	05093	18022	44714 496	
	—		5147	68583	59893	45066	04832 768	
62 85	.83451	14379	71523	23439	27588	55775	059	
	+	43	24895	89768	45199	72956	39881 728	
	—		5150	35364	90763	35820	27939 840	
62 90	.83494	39275	61291	68639	00544	95656	767	
	+	43	19745	54403	54436	37136	11941 888	
	—		5153	01828	51664	24754	81391 104	
62 95	.83537	59021	15695	23075	37681	07599	032	
	+	43	14592	52575	02772	12381	30550 784	
	—		5155	67974	26159	30449	01635 072	

c	Sine						
63 00'	.83580	73613	68270	25847	50062	38149	264
	+	43	09436	84600	76612	81932	28915 712
	—		5158	33801	97831	32227	46839 040
63 05	.83623	83050	52871	02460	31994	67064	979
	+	43	04278	50798	78781	49704	82076 672
	—		5160	99311	50282	71172	66486 272
63 10	.83666	87329	03669	81241	81699	49142	050
	+	42	99117	51487	28498	78532	15590 400
	—		5163	64502	67135	51136	49950 720
63 15	.83709	86446	55157	09740	60231	64732	461
	+	42	93953	86984	61363	27395	65639 680
	—		5166	29375	32031	39750	53969 408
63 20	.83752	80400	42141	71103	87627	30372	468
	+	42	88787	57609	29331	87645	11670 272
	—		5168	93929	28631	69435	09019 648
63 25	.83795	69187	99751	00435	75272	42042	484
	+	42	83618	63680	00700	18210	02650 624
	—		5171	58164	40617	38407	04481 280
63 30	.83838	52806	63431	01135	93482	44693	016
	+	42	78447	05515	60082	79802	98169 344
	—		5174	22080	51689	11686	52527 616
63 35	.83881	31253	68946	61218	73285	42862	119
	+	42	73272	83435	08393	68116	45641 728
	—		5176	85677	45567	22102	30700 032
63 40	.83924	04526	52381	69612	41401	88504	293
	+	42	68095	97757	62826	46014	14941 696
	—		5179	48955	05991	71296	03135 488
63 45	.83966	72622	50139	32438	87416	03445	995
	+	42	62916	48802	56834	74718	11806 208
	—		5182	11913	16722	30725	20263 680

c	Sine							
63 50'	.84009	35538	98941	89273	62134	15252	348	
	+	42	57734	36889	40112	43992	91542	528
	—		5184	74551	61538	42664	97094	656
63 55	.84051	93273	35831	29386	06127	06794	720	
	+	42	52549	62337	78574	01327	94447	872
	—		5187	36870	24239	21208	69861	376
63 60	.84094	45822	98169	07960	07455	01242	155	
	+	42	47362	25467	54334	80119	24586	496
	—		5189	98868	88643	53267	31061	248
63 65	.84136	93185	23636	62294	87574	25828	561	
	+	42	42172	26598	65691	26851	93525	248
	—		5192	60547	38589	99567	42813	696
63 70	.84179	35357	50235	27986	14426	19353	643	
	+	42	36979	66051	27101	27284	50711	552
	—		5195	21905	57936	95648	28440	576
63 75	.84221	72337	16286	55087	41710	70065	241	
	+	42	31784	44145	69164	31636	22270	976
	—		5197	82943	30562	52857	42239	744
63 80	.84264	04121	60432	24251	73346	92336	154	
	+	42	26586	61202	38601	78778	80031	232
	—		5200	43660	40364	59345	17389	312
63 85	.84306	30708	21634	62853	52125	72367	584	
	+	42	21386	17541	98237	19433	62641	920
	—		5203	04056	71260	81057	91891	456
63 90	.84348	52094	39176	61090	71559	35009	824	
	+	42	16183	13485	26976	38375	70750	464
	—		5205	64132	07188	62730	12543	488
63 95	.84390	68277	52661	88067	09935	05760	567	
	+	42	10977	49353	19787	75645	58206	976
	—		5208	23886	32105	28875	16832	768

c	Sine							
64 00'	.84432	79255	02015	07854	85580	63966	976	
	+	42	05769	25466	87682	46770	41374 208	
	—		5210	83319	29987	84774	92682 752	
64 05	.84474	85024	27481	95537	32351	05340	976	
	+	42	00558	42147	57694	61995	48691 456	
	—		5213	42430	84833	17468	16086 016	
64 10	.84516	85582	69629	53231	94346	54032	655	
	+	41	95344	99716	72861	44527	32605 440	
	—		5216	01220	80657	96737	66405 120	
64 15	.84558	80927	69346	26093	38873	86638	839	
	+	41	90128	98495	92203	47789	66200 320	
	—		5218	59689	01498	76096	19446 784	
64 20	.84600	71056	67842	18296	86663	52838	424	
	+	41	84910	38806	90704	71693	46753 536	
	—		5221	17835	31411	93771	18096 384	
64 25	.84642	55967	06649	09001	58356	99592	620	
	+	41	79689	20971	59292	77922	28657 152	
	—		5223	75659	54473	73688	20610 048	
64 30	.84684	35656	27620	68294	36279	28249	539	
	+	41	74465	45312	04819	04234	08047 104	
	—		5226	33161	54780	26453	26319 616	
64 35	.84726	10121	72932	73113	40513	36296	115	
	+	41	69239	12150	50038	77780	81727 488	
	—		5228	90341	16447	50333	78877 440	
64 40	.84767	79360	85083	23152	18294	18023	906	
	+	41	64010	21809	33591	27447	02850 048	
	—		5231	47198	23611	32238	46850 560	
64 45	.84809	43371	06892	56743	45741	20874	338	
	+	41	58778	74611	09979	95208	55999 488	
	—		5234	03732	60427	48695	81634 560	

c	Sine							
64 50'	.84851	02149	81503	66723	40949	76873	965	
	+	41	53544	70878	49552	46512	74364	928
	—		5236	59944	11071	66831	52671	744
64 55	.84892	55694	52382	16275	87462	51238	190	
	+	41	48308	10934	38480	79681	21693	184
	—		5239	15832	59739	45344	59846	656
64 60	.84934	04002	63316	54756	67143	72931	576	
	+	41	43068	95101	78741	34336	61846	528
	—		5241	71397	90646	35482	23068	160
64 65	.84975	47071	58418	33498	01480	34777	984	
	+	41	37827	23703	88094	98854	38778	368
	—		5244	26639	88027	82013	48883	456
64 70	.85016	84898	82122	21593	00334	73556	808	
	+	41	32582	97064	00067	16840	89894	912
	—		5246	81558	36139	24201	74200	832
64 75	.85058	17481	79186	21660	17175	63451	325	
	+	41	27336	15505	63927	92639	15694	080
	—		5249	36153	19255	96775	86904	064
64 80	.85099	44817	94691	85588	09814	79145	747	
	+	41	22086	79352	44671	95863	28790	016
	—		5251	90424	21673	30900	23421	952
64 85	.85140	66904	74044	30260	05678	07935	388	
	+	41	16834	88928	22998	64963	05368	064
	—		5254	44371	27706	55143	43146	496
64 90	.85181	83739	62972	53258	70641	13303	477	
	+	41	11580	44556	95292	09819	62221	568
	—		5256	97994	21690	96445	79616	768
64 95	.85222	95320	07529	48550	80460	75524	622	
	+	41	06323	46562	73601	13373	82604	800
	—		5259	51292	87981	81085	68453	120

c	Sine							
65 00'	.85264	01643	54092	22151	93834	58130	241	
	+	41	01063	95269	85619	32288	14151 680	
	—		5262	04267	10954	35644	51961 856	
65 05	.85305	02707	49362	07771	26122	72281	859	
	+	40	95801	91002	74664	96643	62189 824	
	—		5264	56916	75003	87970	60342 784	
65 10	.85345	98509	40364	82436	22766	34471	301	
	+	40	90537	34085	99661	08673	01847 040	
	—		5267	09241	64545	68141	69440 256	
65 15	.85386	89046	74450	82097	31439	36318	610	
	+	40	85270	24844	35115	40531	32406 784	
	—		5269	61241	64015	09426	35018 240	
65 20	.85427	74316	99295	17212	71970	68725	247	
	+	40	80000	63602	71100	31104	97388 544	
	—		5272	12916	57867	49244	03443 712	
65 25	.85468	54317	62897	88313	03075	66113	407	
	+	40	74728	50686	13232	81860	93944 832	
	—		5274	64266	30578	30123	98728 192	
65 30	.85509	29046	13584	01545	84936	60058	136	
	+	40	69453	86419	82654	51736	95216 640	
	—		5277	15290	66643	00662	85931 520	
65 35	.85549	98500	00003	84200	36673	55275	275	
	+	40	64176	71129	16011	51074	09285 120	
	—		5279	65989	50577	16481	10786 560	
65 40	.85590	62676	71133	00211	87747	64560	077	
	+	40	58897	05139	65434	34592	98498 560	
	—		5282	16362	66916	41178	15514 112	
65 45	.85631	21573	76272	65646	22340	63059	421	
	+	40	53614	88776	98517	93414	82984 448	
	—		5284	66410	00216	47286	30811 648	

c	Sine							
65 50'	.85671	75188	65049	64164	15755	46043	077	
	+	40	48330	22366	98301	46128	52172 800	
	—		5287	16131	35053	17223	43879 680	
65 55	.85712	23518	87416	62465	61883	98216	654	
	+	40	43043	06235	63248	28905	08293 120	
	—		5289	65526	56022	44244	42507 264	
65 60	.85752	66561	93652	25713	90789	06509	491	
	+	40	37753	40709	07225	84660	65785 856	
	—		5292	14595	47740	33391	35075 328	
65 65	.85793	04315	34361	32939	75449	72295	444	
	+	40	32461	26113	59485	51269	30710 528	
	—		5294	63337	94843	02442	46518 784	
65 70	.85833	36776	60474	92425	26719	03005	579	
	+	40	27166	62775	64642	48826	84191 744	
	—		5297	11753	81986	82859	90065 152	
65 75	.85873	63943	23250	57067	75545	87196	950	
	+	40	21869	51021	82655	65966	94126 592	
	—		5299	59842	93848	20736	14823 424	
65 80	.85913	85812	74272	39723	41512	81324	125	
	+	40	16569	91178	88807	45230	79303 168	
	—		5302	07605	15123	77739	29062 400	
65 85	.85954	02382	65451	28530	86743	60626	833	
	+	40	11267	83573	73683	67491	50240 768	
	—		5304	55040	30530	32056	99167 232	
65 90	.85994	13650	49025	02214	54235	10868	432	
	+	40	05963	28533	43153	35434	51073 536	
	—		5307	02148	24804	79339	24198 400	
65 95	.86034	19613	77558	45367	89669	61941	765	
	+	40	00656	26385	18348	56095	26875 136	
	—		5309	48928	82704	33639	86041 856	

c	Sine						
66 00'	.86074	20270	03943	63716	45764	88816	771
	+	39	95346	77456	35644	22455	40833 280
	—		5311	95381	89006	28356	74984 448
66 05	.86114	15616	81399	99360	68220	29650	020
	+	39	90034	82074	46637	94098	65848 832
	—		5314	41507	28508	17170	90799 616
66 10	.86154	05651	63474	45998	62318	95498	961
	+	39	84720	40567	18129	76927	75049 216
	—		5316	87304	86027	74984	19165 184
66 15	.86193	90372	04041	64128	39246	70547	833
	+	39	79403	53262	32102	01943	55884 032
	—		5319	32774	46402	98855	83405 056
66 20	.86233	69775	57303	96230	41190	26432	394
	+	39	74084	20487	85699	03087	72478 976
	—		5321	77915	94492	08937	71537 408
66 25	.86273	43859	77791	81929	44277	98911	205
	+	39	68762	42571	91206	94150	00941 568
	—		5324	22729	15173	49408	38448 128
66 30	.86313	12622	20363	73136	38427	99852	434
	+	39	63438	19842	76033	44741	62493 440
	—		5326	67213	93345	89405	83307 264
66 35	.86352	76060	40206	49169	83169	62346	365
	+	39	58111	52628	82687	55335	79186 176
	—		5329	11370	13928	23959	01991 936
66 40	.86392	34171	92835	31857	38505	41531	852
	+	39	52782	41258	68759	31376	77194 240
	—		5331	55197	61859	74918	14596 608
66 45	.86431	86954	34094	00616	69882	18726	281
	+	39	47450	86061	06899	56458	62597 632
	—		5333	98696	22099	91883	67895 552

c	Sine							
66 50'	.86471	34405	20155	07516	26340	81324	501	
	+	39	42116	87364	84799	64574	94702 080	
	—		5336	41865	79628	53134	12734 976	
66 55	.86510	76522	07519	92315	90915	76026	591	
	+	39	36780	45499	05171	11440	81967 104	
	—		5338	84706	19445	66552	56261 632	
66 60	.86550	13302	53018	97487	02356	57992	719	
	+	39	31441	60792	85725	44888	25705 472	
	—		5341	27217	26571	70551	88987 904	
66 65	.86589	44744	13811	83212	47244	83698	232	
	+	39	26100	33575	59153	74336	36717 568	
	—		5343	69398	86047	34998	86598 144	
66 70	.86628	70844	47387	42366	21581	20416	466	
	+	39	20756	64176	73106	39337	50119 424	
	—		5346	11250	82933	62136	86400 000	
66 75	.86667	91601	11564	15472	60918	70535	776	
	+	39	15410	52925	90172	77200	63719 424	
	—		5348	52773	02311	87507	38489 344	
66 80	.86707	07011	64490	05645	38119	34255	443	
	+	39	10062	00152	87860	89693	25230 080	
	—		5350	93965	29283	80870	31409 664	
66 85	.86746	17073	64642	93506	27812	59484	896	
	+	39	04711	06187	58577	08822	93820 416	
	—		5353	34827	48971	47122	92378 624	
66 90	.86785	21784	70830	52083	36635	53306	099	
	+	38	99357	71360	09605	61700	01441 792	
	—		5355	75359	46517	27217	61978 368	
66 95	.86824	21142	42190	61688	98335	54747	563	
	+	38	94001	96000	63088	34482	39463 424	
	—		5358	15561	07083	99078	43212 288	

c	Sine							
67 00'	.86863	15144	38191	24777	32817	94210	646	
	+	38	88643	80439	56004	35403	96251 136	
	—		5360	55432	15854	78516	24965 120	
67 05	.86902	03788	18630	80781	68221	90462	057	
	+	38	83283	25007	40149	56887	71286 016	
	—		5362	94972	58033	20142	79699 456	
67 10	.86940	87071	43638	20931	25109	61747	538	
	+	38	77920	30034	82116	36744	91586 560	
	—		5365	34182	18843	18283	35456 256	
67 15	.86979	64991	73673	03047	61854	53334	049	
	+	38	72554	95852	63273	18461	56130 304	
	—		5367	73060	83529	07888	21942 272	
67 20	.87018	37546	69525	66320	80316	09465	122	
	+	38	67187	22791	79744	10573	34188 032	
	—		5370	11608	37355	65442	90857 984	
67 25	.87057	04733	92317	46064	90889	43652	574	
	+	38	61817	11183	42388	45130	43330 048	
	—		5372	49824	65608	09877	10177 280	
67 30	.87095	66551	03500	88453	36019	86983	209	
	+	38	56444	61358	76780	35253	33152 768	
	—		5374	87709	53592	03472	32535 552	
67 35	.87134	22995	64859	65233	71273	20135	744	
	+	38	51069	73649	23188	31781	00617 216	
	—		5377	25262	86633	52768	37494 784	
67 40	.87172	74065	38508	88422	03054	20752	719	
	+	38	45692	48386	36554	79012	63122 432	
	—		5379	62484	50079	09468	47775 744	
67 45	.87211	19757	86895	24976	82066	83875	280	
	+	38	40312	85901	86475	69544	15346 688	
	—		5381	99374	29295	71343	19281 152	

c	Sine							
67 50'	.87249	60070	72797	11452	51610	99222	116	
	+	38	34930	86527	57179	98200	96065	536
	—		5384	35932	09670	83133	04940	544
67 55	.87287	95001	59324	68632	49811	95287	881	
	+	38	29546	50595	47509	15067	91124	992
	—		5386	72157	76612	37449	92282	624
67 60	.87326	24548	09920	16141	64879	86412	415	
	+	38	24159	78437	70896	77617	98842	368
	—		5389	08051	15548	75677	14649	088
67 65	.87364	48707	88357	87038	42497	85255	250	
	+	38	18770	70386	55348	01940	84193	280
	—		5391	43612	11928	88868	36105	216
67 70	.87402	67478	58744	42386	44438	69448	355	
	+	38	13379	26774	43419	13072	48088	064
	—		5393	78840	51222	18645	09822	976
67 75	.87440	80857	85518	85805	57511	17536	151	
	+	38	07985	47933	92196	94427	38265	088
	—		5396	13736	18918	58093	10064	640
67 80	.87478	88843	33452	78002	51938	55800	916	
	+	38	02589	34197	73278	36334	28200	448
	—		5398	48299	00528	52657	37542	656
67 85	.87516	91432	67650	51280	88272	84001	671	
	+	37	97190	85898	72749	83676	90657	792
	—		5400	82528	81583	01035	98243	840
67 90	.87554	88623	53549	24030	71949	74659	710	
	+	37	91790	03369	91166	82640	92413	952
	—		5403	16425	47633	56072	55565	312
67 95	.87592	80413	56919	15197	54590	67073	774	
	+	37	86386	86944	43533	26568	36848	640
	—		5405	49988	84252	25647	55727	360

c	Sine							
68 00'	.87630	66800	43863	58730	81159	03922	398	
	+	37	80981	36955	59281	00920	81121 280	
	—		5407	83218	77031	73568	26474 496	
68 05	.87668	47781	80819	18011	82079	85043	000	
	+	37	75573	53736	82249	27352	54646 784	
	—		5410	16115	11585	20457	48884 480	
68 10	.87706	23355	34556	00261	09432	39690	476	
	+	37	70163	37621	70664	06895	05762 304	
	—		5412	48677	73546	44641	02382 592	
68 15	.87743	93518	72177	70925	16327	45452	885	
	+	37	64750	88943	97117	62254	03379 712	
	—		5414	80906	48569	83033	82736 896	
68 20	.87781	58269	61121	68042	78581	48832	544	
	+	37	59336	08037	48547	79220	20642 816	
	—		5417	12801	22330	32024	93165 568	
68 25	.87819	17605	69159	16590	57801	69475	067	
	+	37	53918	95236	26217	47195	27477 248	
	—		5419	44361	80523	48361	08317 696	
68 30	.87856	71524	64395	42808	04996	96951	919	
	+	37	48499	50874	45693	98834	19159 552	
	—		5421	75588	08865	50029	11219 712	
68 35	.87894	20024	15269	88502	03831	16111	959	
	+	37	43077	75286	36828	48805	07939 840	
	—		5424	06479	93093	17137	03059 456	
68 40	.87931	63101	90556	25330	52636	24051	682	
	+	37	37653	68806	43735	31668	04880 384	
	—		5426	37037	18963	92793	85740 288	
68 45	.87969	00755	59362	69065	84304	28932	457	
	+	37	32227	31769	24771	38874	19140 096	
	—		5428	67259	72255	83988	17234 944	

c	Sine						
68 50'	.88006	32982	91131	93837	23178	48072	124
	+	37	26798	64509	52515	54886	01905 152
	—		5430	97147	38767	62465	39553 792
68 55	.88043	59781	55641	46352	78064	49977	639
	+	37	21367	67362	13747	92420	62351 360
	—		5433	26700	04318	65603	79443 200
68 60	.88080	81149	23003	60100	70485	12328	926
	+	37	15934	40662	09429	26816	82908 160
	—		5435	55917	54748	97289	21563 136
68 65	.88117	97083	63665	69529	97301	95236	741
	+	37	10498	84744	54680	29527	61345 024
	—		5437	84799	75919	28788	54266 880
68 70	.88155	07582	48410	24210	26829	56582	051
	+	37	05060	99944	78761	00739	07078 144
	—		5440	13346	53710	99621	87837 440
68 75	.88192	12643	48355	02971	27568	63659	622
	+	36	99620	86598	25050	01117	19240 704
	—		5442	41557	74026	18433	45114 112
68 80	.88229	12264	34953	28021	28685	82900	263
	+	36	94178	45040	51023	82683	74126 592
	—		5444	69433	22787	63861	24512 256
68 85	.88266	06442	79993	79045	11369	57027	038
	+	36	88733	75607	28236	18822	49614 336
	—		5446	96972	85938	85405	35363 584
68 90	.88302	95176	55601	07281	30192	06641	615
	+	36	83286	78634	42297	33417	14250 752
	—		5449	24176	49444	04295	05491 968
68 95	.88339	78463	34235	49578	63609	20892	769
	+	36	77837	54457	92853	29122	08758 784
	—		5451	51043	99288	14354	60993 024

c	Sine							
69 00'	.88376	56300	88693	42431	92731	29650	851	
	+	36	72386	03413	93565	14767	47765 760	
	—		5453	77575	21476	82867	78202 112	
69 05	.88413	28686	92107	35997	07498	77416	961	
	+	36	66932	25838	72088	31899	69563 648	
	—		5456	03770	02036	51441	07702 272	
69 10	.88449	95619	17946	08085	39398	46980	782	
	+	36	61476	22068	70051	80458	61861 376	
	—		5458	29628	27014	36865	70457 088	
69 15	.88486	57095	40014	78137	19857	08841	610	
	+	36	56017	92440	43037	43592	91404 288	
	—		5460	55149	82478	31978	25829 888	
69 20	.88523	13113	32455	21174	63450	00245	946	
	+	36	50557	37290	60559	11614	65574 400	
	—		5462	80334	54517	06520	11652 096	
69 25	.88559	63670	69745	81733	75064	65821	041	
	+	36	45094	56956	06042	05094	53922 304	
	—		5465	05182	29240	07995	56113 408	
69 30	.88596	08765	26701	87775	80159	19743	318	
	+	36	39629	51773	76801	97098	97808 896	
	—		5467	29692	92777	62528	61473 792	
69 35	.88632	48394	78475	64577	77258	17551	567	
	+	36	34162	22080	84024	34570	36335 104	
	—		5469	53866	31280	75718	59620 864	
69 40	.88668	82557	00556	48602	11828	53886	552	
	+	36	28692	68214	52743	58851	76714 240	
	—		5471	77702	30921	33494	39279 104	
69 45	.88705	11249	68771	01345	70680	30600	984	
	+	36	23220	90512	21822	25357	37435 136	
	—		5474	01200	77892	02967	44954 880	

c	Sine							
69 50'	.88741	34470	59283	23167	96037	68036	167	
	+	36	17746	89311	43930	22389	92480	256
	—		5476	24361	58406	33283	47462	656
69 55	.88777	52217	48594	67098	18427	60517	059	
	+	36	12270	64949	85523	89106	45017	600
	—		5478	47184	58698	56472	86051	840
69 60	.88813	64488	13544	52622	07534	05533	720	
	+	36	06792	17765	26825	32633	58965	760
	—		5480	69669	65023	88299	82006	272
69 65	.88849	71280	31309	79447	40167	64499	808	
	+	36	01311	48095	61801	44333	76959	488
	—		5482	91816	63658	29110	23776	768
69 70	.88885	72591	79405	41248	84501	41459	694	
	+	35	95828	56278	98143	15223	53182	720
	—		5485	13625	40898	64678	23462	400
69 75	.88921	68420	35684	39391	99724	94642	568	
	+	35	90343	42653	57244	50545	29720	320
	—		5487	35095	83062	67051	44672	256
69 80	.88957	58763	78337	96636	50270	24362	760	
	+	35	84856	07557	74181	83493	85048	064
	—		5489	56227	76488	95395	01725	696
69 85	.88993	43619	85895	70818	33764	09410	604	
	+	35	79366	51329	97692	88098	83322	368
	—		5491	77021	07536	96834	30053	888
69 90	.89029	22986	37225	68511	21862	92732	677	
	+	35	73874	74308	90155	91264	53268	480
	—		5493	97475	62587	07296	27856	896
69 95	.89064	96861	11534	58667	13127	46001	537	
	+	35	68380	76833	27568	83968	25411	584
	—		5496	17591	28040	52349	68870	912

c	Sine							
70 00'	.89100	65241	88367	86235	97095	71413	213	
	+	35	62884	59241	99528	31618	56540 672	
	—		5498	37367	90319	48043	86283 520	
70 05	.89136	28126	47609	85764	28714	27953	757	
	+	35	57386	21874	09208	83574	70257 152	
	—		5500	56805	35867	01746	27635 200	
70 10	.89171	85512	69483	94973	12288	98210	541	
	+	35	51885	65068	73341	81828	42621 952	
	—		5502	75903	51147	12978	80777 728	
70 15	.89207	37398	34552	68314	94117	40832	441	
	+	35	46382	89165	22194	68849	61844 224	
	—		5504	94662	22644	74252	70748 160	
70 20	.89242	83781	23717	90509	62967	02676	859	
	+	35	40877	94502	99549	94596	91096 064	
	—		5507	13081	36865	71902	27526 656	
70 25	.89278	24659	18220	90059	57563	93773	079	
	+	35	35370	81421	62684	22694	63569 408	
	—		5509	31160	80336	86917	24674 048	
70 30	.89313	60029	99642	52743	80258	57342	758	
	+	35	29861	50260	82347	35777	38895 360	
	—		5511	48900	39605	95773	88719 104	
70 35	.89348	89891	49903	35091	16035	96237	506	
	+	35	24350	01360	42741	40003	50176 256	
	—		5513	66300	01241	71264	79315 968	
70 40	.89384	14241	51263	77832	56039	46413	917	
	+	35	18836	35060	41499	68738	70860 288	
	—		5515	83359	51833	83327	40062 208	
70 45	.89419	33077	86324	19332	24778	17273	914	
	+	35	13320	51700	89665	85411	30798 080	
	—		5518	00078	77992	99871	20003 072	

c	Sine							
70 50'	.89454	46398	38025	08998	10189	48072	280	
	+	35	07802	51622	11672	85540	10795 008	
	—		5520	16457	66350	87603	65648 896	
70 55	.89489	54200	89647	20670	95729	58866	995	
	+	35	02282	35164	45321	97936	45146 112	
	—		5522	32496	03560	12854	83601 920	
70 60	.89524	56483	24811	65992	93666	04013	484	
	+	34	96760	02668	41761	85081	61544 192	
	—		5524	48193	76294	42400	73620 480	
70 65	.89559	53243	27480	07754	78747	65558	110	
	+	34	91235	54474	65467	42680	87923 712	
	—		5526	63550	71248	44285	32133 888	
70 70	.89594	44478	81954	73222	21428	53481	099	
	+	34	85708	90923	94218	98395	55789 824	
	—		5528	78566	75137	88641	26140 416	
70 75	.89629	30187	72878	67441	19824	09270	866	
	+	34	80180	12357	19081	09754	29649 408	
	—		5530	93241	74699	48509	37426 944	
70 80	.89664	10367	85235	86522	29578	38920	725	
	+	34	74649	19115	44381	61244	92222 464	
	—		5533	07575	56691	00656	77108 224	
70 85	.89698	85017	04351	30903	90823	31142	728	
	+	34	69116	11539	87690	60588	15114 240	
	—		5535	21568	07891	26393	70319 872	
70 90	.89733	54133	15891	18594	51411	46257	620	
	+	34	63580	89971	79799	34194	44794 368	
	—		5537	35219	15100	12389	11196 160	
70 95	.89768	17714	05862	98393	85605	91051	455	
	+	34	58043	54752	64699	21805	33598 208	
	—		5539	48528	65138	51484	87884 800	

c	Sine						
71 00'	.89802	75757	60615	63093	07411	24649	887
	+	34	52504	06223	99560	70320	45713 408
	—		5541	61496	44848	43508	77700 096
71 05	.89837	28261	66839	62653	77731	70362	918
	+	34	46962	44727	54712	26811	68013 312
	—		5543	74122	41092	96086	12280 320
71 10	.89871	75224	11567	17366	04543	38376	686
	+	34	41418	70605	13619	30725	55732 992
	—		5545	86406	40756	25450	12748 288
71 15	.89906	16642	82172	30985	35268	94110	023
	+	34	35872	84198	72863	05275	42984 704
	—		5547	98348	30743	57250	94773 760
71 20	.89940	52515	66371	03848	40544	37094	111
	+	34	30324	85850	42119	48024	48210 944
	—		5550	09947	97981	27363	43518 208
71 25	.89974	82840	52221	45967	88568	85305	663
	+	34	24774	75902	44138	20661	04692 736
	—		5552	21205	29416	82693	58473 216
71 30	.90009	07615	28123	90106	09229	89997	984
	+	34	19222	54697	14721	37967	46219 520
	—		5554	32120	12018	81983	67961 088
71 35	.90043	26837	82821	04827	47197	36217	399
	+	34	13668	22577	02702	55983	78258 432
	—		5556	42692	32776	96616	13489 152
71 40	.90077	40506	05398	07530	03181	14476	048
	+	34	08111	79884	69925	59367	64769 280
	—		5558	52921	78702	11416	03706 880
71 45	.90111	48617	85282	77455	62548	79245	674
	+	34	02553	26962	91223	47951	61062 400
	—		5560	62808	36826	25452	38021 120

c	Sine							
71 50'	.90145	51171	12245	68679	10500	40308	106	
	+	33	96992	64154	54397	22499	23041 280	
	—		5562	72351	94202	52837	99806 976	
71 55	.90179	48163	76400	23076	32999	63348	742	
	+	33	91429	91802	60194	69661	23234 304	
	—		5564	81552	37905	23528	19108 864	
71 60	.90213	39593	68202	83271	02660	86583	562	
	+	33	85865	10250	22289	46133	04125 440	
	—		5566	90409	55029	84118	04902 400	
71 65	.90247	25458	78453	05560	48793	90709	090	
	+	33	80298	19840	67259	62014	99223 040	
	—		5568	98923	32692	98638	46690 816	
71 70	.90281	05756	98293	72820	10808	89931	276	
	+	33	74729	20917	34566	63376	52532 224	
	—		5571	07093	58032	49350	85577 216	
71 75	.90314	80486	19211	07386	74185	42463	855	
	+	33	69158	13823	76534	14025	66955 008	
	—		5573	14920	18207	37540	54626 304	
71 80	.90348	49644	33034	83920	88211	09418	739	
	+	33	63584	98903	58326	76485	12328 704	
	—		5575	22403	00397	84308	88522 752	
71 85	.90382	13229	31938	42247	64696	21748	169	
	+	33	58009	76500	57928	92176	23805 952	
	—		5577	29541	91805	31364	02471 936	
71 90	.90415	71239	08439	00176	56872	45553	398	
	+	33	52432	46958	66123	60812	21334 016	
	—		5579	36336	79652	41810	40288 768	
71 95	.90449	23671	55397	66300	17684	66887	559	
	+	33	46853	10621	86471	19001	81045 248	
	—		5581	42787	51183	00936	91635 712	

c	Sine							
72 00'	.90482	70524	66019	52771	36686	47933	284	
	+	33	41271	67834	35288	18064	89409 536	
	—		5583	48893	93662	17003	78334 208	
72 05	.90516	11796	33853	88059	54751	37342	350	
	+	33	35688	18940	41626	01061	11075 328	
	—		5585	54655	94376	22028	09751 552	
72 10	.90549	47484	52794	29685	55812	48417	976	
	+	33	30102	64284	47249	79033	01323 776	
	—		5587	60073	40632	72568	07148 544	
72 15	.90582	77587	17078	76935	34845	49741	314	
	+	33	24515	04211	06617	06464	94175 232	
	—		5589	65146	19760	50505	97000 192	
72 20	.90616	02102	21289	83552	41310	43916	860	
	+	33	18925	39064	86856	55958	97175 040	
	—		5591	69874	19109	63829	73210 624	
72 25	.90649	21027	60354	70408	97269	41091	631	
	+	33	13333	69190	67746	92129	23964 416	
	—		5593	74257	26051	47413	28172 032	
72 30	.90682	34361	29545	38155	89398	65055	768	
	+	33	07739	94933	41695	44715	95792 384	
	—		5595	78295	27978	63795	52623 616	
72 35	.90715	42101	24478	79851	34114	60848	851	
	+	33	02144	16638	13716	80920	43168 768	
	—		5597	81988	12305	03958	04292 096	
72 40	.90748	44245	41116	93568	15035	04017	659	
	+	32	96546	34650	01411	76962	38876 672	
	—		5599	85335	66465	88101	45199 104	
72 45	.90781	40791	75766	94979	91997	42894	190	
	+	32	90946	49314	34945	88860	93677 568	
	—		5601	88337	77917	66420	47657 984	

c	Sine							
72 50'	.90814	31738	25081	29925	80858	36571	823	
	+	32	85344	60976	57028	22440	46019 584	
	—		5603	90994	34138	19877	68876 032	
72 55	.90847	17082	86057	86954	03298	82590	975	
	+	32	79740	69982	22890	02562	77143 552	
	—		5605	93305	22626	60975	94097 664	
72 60	.90879	96823	56040	09844	05861	59735	173	
	+	32	74134	76677	00263	41586	83045 888	
	—		5607	95270	30903	34529	48321 280	
72 65	.90912	70958	32717	10107	47448	42780	787	
	+	32	68526	81406	69360	07057	34724 608	
	—		5609	96889	46510	18433	76380 928	
72 70	.90945	39485	14123	79467	54505	77505	781	
	+	32	62916	84517	22849	88623	58343 680	
	—		5611	98162	57010	24433	91596 544	
72 75	.90978	02401	98641	02317	43129	35848	796	
	+	32	57304	86354	65839	64189	66747 136	
	—		5613	99089	49987	98891	92627 200	
72 80	.91010	59706	84995	68157	07319	02596	387	
	+	32	51690	87265	15851	65297	74119 936	
	—		5615	99670	13049	23552	48812 032	
72 85	.91043	11397	72260	84008	72616	76716	061	
	+	32	46074	87595	02802	41745	25307 904	
	—		5617	99904	33821	16307	53666 048	
72 90	.91075	57472	59855	86811	14362	02023	655	
	+	32	40456	87690	68981	25437	71641 856	
	—		5619	99791	99952	31959	46674 176	
72 95	.91107	97929	47546	55792	39799	73665	495	
	+	32	34836	87898	69028	93478	24967 680	
	—		5621	99332	99112	62983	03259 648	

c	Sine							
73 00'	.91140	32766	35445	24821	33277	98633	915	
	+	32	29214	88565	69916	30495	21708 032	
	—		5623	98527	18993	40285	92876 544	
73 05	.91172	61981	24010	94737	63773	20341	565	
	+	32	23590	90038	50922	90209	28831 488	
	—		5625	97374	47307	33968	05193 728	
73 10	.91204	85572	14049	45660	53982	49172	761	
	+	32	17964	92664	03615	56241	23637 760	
	—		5627	95874	71788	54079	44332 288	
73 15	.91237	03537	06713	49276	10223	72811	068	
	+	32	12336	96789	31827	02161	79305 472	
	—		5629	94027	80192	51376	91110 400	
73 20	.91269	15874	03502	81103	12385	52116	407	
	+	32	06707	02761	51634	50784	88195 072	
	—		5631	91833	60296	18079	33205 504	
73 25	.91301	22581	06264	32737	63170	40310	851	
	+	32	01075	10927	91338	32705	54989 568	
	—		5633	89291	99897	88621	63239 936	
73 30	.91333	23656	17192	24075	95875	95301	014	
	+	31	95441	21635	91440	44083	91749 632	
	—		5635	86402	86817	40407	44743 936	
73 35	.91365	19097	38828	15516	39959	87050	222	
	+	31	89805	35233	04623	03676	47005 696	
	—		5637	83166	08895	94560	45887 488	
73 40	.91397	08902	74061	20139	43636	34055	742	
	+	31	84167	52066	95727	09116	01118 208	
	—		5639	79581	53996	16674	41011 712	
73 45	.91428	93070	26128	15866	52752	35174	197	
	+	31	78527	72485	41730	92441	60106 496	
	—		5641	75649	10002	17561	79844 096	

c	Sine							
73 50'	.91460	71597	98613	57597	45193	95281	363	
	+	31	72885	96836	31728	74879	80262	400
	—		5643	71368	64819	54001	24456	960
73 55	.91492	44483	95449	89326	20073	75542	921	
	+	31	67242	25467	66909	20878	55805	440
	—		5645	66740	06375	29483	53726	464
73 60	.91524	11726	20917	56235	40952	31348	958	
	+	31	61596	58727	60533	91395	02078	976
	—		5647	61763	22617	94956	35521	536
73 65	.91555	73322	79645	16769	32347	33427	357	
	+	31	55948	96964	37915	96438	66557	440
	—		5649	56438	01517	49567	66302	208
73 70	.91587	29271	76609	54685	28785	99985	015	
	+	31	50299	40526	36398	46871	00255	232
	—		5651	50764	31065	41407	78278	912
73 75	.91618	79571	17135	91083	75657	00240	257	
	+	31	44647	89762	05333	05463	21976	320
	—		5653	44741	99274	68250	13990	400
73 80	.91650	24219	06897	96416	81120	22216	350	
	+	31	38994	45020	06058	37213	07985	920
	—		5655	38370	94179	78290	68268	544
73 85	.91681	63213	51918	02475	18333	30202	546	
	+	31	33339	06649	11878	58922	39717	376
	—		5657	31651	03836	70885	97578	752
73 90	.91712	96552	58567	14353	77255	69920	282	
	+	31	27681	74998	08041	88036	42138	624
	—		5659	24582	16322	97289	96647	936
73 95	.91744	24234	33565	22395	65292	12058	586	
	+	31	22022	50415	91718	90746	45490	688
	—		5661	17164	19737	61389	42349	312

c	Sine							
74 00'	.91775	46256	83981	14114	56038	57549	673	
	+	31	16361	33251	71981	29357	03141 376	
	—		5663	09397	02201	20438	04825 600	
74 05	.91806	62618	17232	86095	85395	60691	041	
	+	31	10698	23854	69780	08918	98315 776	
	—		5665	01280	51855	85789	25753 344	
74 10	.91837	73316	41087	55875	94314	59006	919	
	+	31	05033	22574	17924	23129	72562 432	
	—		5666	92814	56865	23627	63753 472	
74 15	.91868	78349	63661	73800	17444	31568	805	
	+	30	99366	29759	61058	99502	08808 960	
	—		5668	83999	05414	55699	06859 008	
74 20	.91899	77715	93421	34859	16946	40377	602	
	+	30	93697	45760	55644	43803	01949 952	
	—		5670	74833	85710	60039	52046 080	
74 25	.91930	71413	39181	90503	60749	42328	240	
	+	30	88026	70926	69933	83763	49903 872	
	—		5672	65318	85981	71702	51731 968	
74 30	.91961	59440	10108	60437	44512	92231	452	
	+	30	82354	05607	83952	12060	98171 904	
	—		5674	55453	94477	83485	27212 544	
74 35	.91992	41794	15716	44389	56573	90404	084	
	+	30	76679	50153	89474	28575	70959 360	
	—		5676	45238	99470	46653	49030 912	
74 40	.92023	18473	65870	33863	85149	61362	507	
	+	30	71003	04914	90003	81922	21928 448	
	—		5678	34673	89252	71664	84156 416	
74 45	.92053	89476	70785	23867	67071	83291	393	
	+	30	65324	70241	00751	10257	37772 032	
	—		5680	23758	52139	28891	10026 240	

c	Sine							
74 50'	.92084	54801	41026	24618	77329	21062	985	
	+	30	59644	46482	48611	81366	27745 792	
	—		5682	12492	76466	49338	95288 832	
74 55	.92115	14445	87508	73230	58695	48808	807	
	+	30	53962	33989	72145	32027	32456 960	
	—		5684	00876	50592	25369	47335 168	
74 60	.92145	68408	21498	45375	90722	81266	194	
	+	30	48278	33113	21553	06657	85121 792	
	—		5685	88909	62896	11416	26462 208	
74 65	.92176	16686	54611	66928	97380	66387	471	
	+	30	42592	44203	58656	95241	58659 584	
	—		5687	76592	01779	24702	26675 712	
74 70	.92206	59278	98815	25585	92622	25047	061	
	+	30	36904	67611	56877	70539	31983 872	
	—		5689	63923	55664	45955	23096 576	
74 75	.92236	96183	66426	82463	63161	57031	661	
	+	30	31215	03688	01213	24584	08887 296	
	—		5691	50904	12996	20121	85904 128	
74 80	.92267	27398	70114	83676	87745	65918	643	
	+	30	25523	52783	88217	04462	22983 168	
	—		5693	37533	62240	57080	60768 256	
74 85	.92297	52922	22898	71893	92207	88901	824	
	+	30	19830	15250	25976	47381	62214 912	
	—		5695	23811	91885	32353	15757 056	
74 90	.92327	72752	38148	97870	39589	51117	150	
	+	30	14134	91438	34091	15028	46457 856	
	—		5697	09738	90439	87814	54636 032	
74 95	.92357	86887	29587	31961	54617	97574	204	
	+	30	08437	81699	43651	27213	91821 824	
	—		5698	95314	46435	32401	96556 800	

c	Sine							
75 00'	.92387	95325	11286	75612	81831	89396	980	
	+	30	02738	86384	97215	94811	95265 024	
	—		5700	80538	48424	42822	22056 448	
75 05	.92417	98063	97671	72828	76643	84661	497	
	+	29	97038	05846	48791	51989	73208 576	
	—		5702	65410	84981	64257	85338 880	
75 10	.92447	95102	03518	21620	28633	57869	992	
	+	29	91335	40435	63809	87731	87869 696	
	—		5704	49931	44703	11071	92802 304	
75 15	.92477	86437	43953	85430	16365	45739	973	
	+	29	85630	90504	19106	76659	95067 392	
	—		5706	34100	16206	67511	47743 232	
75 20	.92507	72068	34458	04536	93025	40807	207	
	+	29	79924	56404	02900	09148	47324 160	
	—		5708	17916	88131	88409	61244 160	
75 25	.92537	51992	90862	07437	02173	88130	958	
	+	29	74216	38487	14768	20738	86080 000	
	—		5710	01381	49139	99886	29123 072	
75 30	.92567	26209	29349	22205	22912	74211	347	
	+	29	68506	37105	65628	20852	56956 928	
	—		5711	84493	87914	00047	74989 824	
75 35	.92596	94715	66454	87833	43765	31167	846	
	+	29	62794	52611	77714	20804	81967 104	
	—		5713	67253	93158	59684	59291 648	
75 40	.92626	57510	19066	65547	64570	13135	446	
	+	29	57080	85357	84555	61120	22675 456	
	—		5715	49661	53600	22968	54365 184	
75 45	.92656	14591	04424	50103	25690	35810	484	
	+	29	51365	35696	30955	38151	68310 272	
	—		5717	31716	57987	08147	85385 472	

c	Sine							
75 50'	.92685	65956	40120	81058	63842	04121	309	
	+	29	45648	03979	72968	30003	82924 800	
	—		5719	13418	95089	08241	37262 080	
75 55	.92715	11604	44100	54026	93845	87045	420	
	+	29	39928	90560	77879	21762	45662 720	
	—		5720	94768	53697	91731	27313 408	
75 60	.92744	51533	34661	31906	15608	32708	120	
	+	29	34207	95792	24181	30031	18349 312	
	—		5722	75765	22627	03254	43819 520	
75 65	.92773	85741	30453	56087	45639	51057	748	
	+	29	28485	20027	01554	26776	74529 792	
	—		5724	56408	90711	64292	50289 664	
75 70	.92803	14226	50480	57641	72416	25587	536	
	+	29	22760	63618	10842	62484	24240 128	
	—		5726	36699	46808	73860	55461 888	
75 75	.92832	36987	14098	68484	34900	49827	993	
	+	29	17034	26918	64033	88623	68778 240	
	—		5728	16636	79797	09194	49006 080	
75 80	.92861	54021	41017	32518	23524	18606	549	
	+	29	11306	10281	84236	79429	19772 160	
	—		5729	96220	78577	26437	02817 792	
75 85	.92890	65327	51299	16755	02953	38378	667	
	+	29	05576	14061	05659	52992	16954 368	
	—		5731	75451	32071	61322	37960 192	
75 90	.92919	70903	65360	22414	55945	55332	122	
	+	28	99844	38609	73587	91669	78994 176	
	—		5733	54328	29224	29859	57099 520	
75 95	.92948	70748	03969	96002	47615	34327	252	
	+	28	94110	84281	44363	61810	21894 656	
	—		5735	32851	59001	29014	42507 776	

c	Sine							
76 00'	.92977	64858	88251	40366	09425	56221	822	
	+	28	88375	51429	85362	32795	79386 880	
	—		5737	11021	10390	37390	19493 376	
76 05	.93006	53234	39681	25728	42221	35607	824	
	+	28	82638	40408	74971	95405	59893 504	
	—		5738	88836	72401	15906	85261 824	
76 10	.93035	35872	80090	00700	37626	95501	714	
	+	28	76899	51572	02570	79498	74631 680	
	—		5740	66298	34065	08479	03185 920	
76 15	.93064	12772	31662	03271	17125	70133	744	
	+	28	71158	85273	68505	71019	71445 760	
	—		5742	43405	84435	42692	62389 248	
76 20	.93092	83931	16935	71776	88145	41579	050	
	+	28	65416	41867	84070	28327	09056 512	
	—		5744	20159	12587	30480	02637 824	
76 25	.93121	49347	58803	55847	16472	50635	662	
	+	28	59672	21708	71482	97847	06418 688	
	—		5745	96558	07617	68794	04500 992	
76 30	.93150	09019	80512	27330	14319	57054	973	
	+	28	53926	25150	63865	29053	01917 696	
	—		5747	72602	58645	40280	44724 224	
76 35	.93178	62946	05662	91195	43372	58972	376	
	+	28	48178	52548	05219	88772	57193 472	
	—		5749	48292	54811	13949	16752 384	
76 40	.93207	11124	58210	96415	32145	16165	820	
	+	28	42429	04255	50408	74823	40441 088	
	—		5751	23627	85277	45844	16443 392	
76 45	.93235	53553	62466	46824	06968	56606	879	
	+	28	36677	80627	65131	28979	23997 696	
	—		5752	98608	39228	79711	92815 616	

c	Sine							
76 50'	.93263	90231	43094	11955	35947	80604	170	
	+	28	30924	82019	25902	49267	31182 080	
	—		5754	73234	05871	47668	63867 904	
76 55	.93292	21156	25113	37857	85215	11786	280	
	+	28	25170	08785	20031	01598	67314 176	
	—		5756	47504	74433	70865	97447 680	
76 60	.93320	46326	33898	57888	86813	79100	436	
	+	28	19413	61280	45597	30732	69866 496	
	—		5758	21420	34165	60155	57007 360	
76 65	.93348	65739	95179	03486	17546	48967	056	
	+	28	13655	39860	11431	70577	12859 136	
	—		5759	94980	74339	16752	12376 064	
76 70	.93376	79395	35039	14917	88123	61826	652	
	+	28	07895	44879	37092	53825	00483 072	
	—		5761	68185	84248	32895	15356 160	
76 75	.93404	87290	79918	52010	41948	62309	408	
	+	28	02133	76693	52844	20929	85126 912	
	—		5763	41035	53208	92509	40197 888	
76 80	.93432	89424	56612	04854	62878	47436	139	
	+	27	96370	35657	99635	28420	44929 024	
	—		5765	13529	70558	71863	88866 048	
76 85	.93460	85794	92270	04489	91298	92365	221	
	+	27	90605	22128	29076	56556	56062 976	
	—		5766	85668	25657	40229	61081 344	
76 90	.93488	76400	14398	33566	47855	48428	150	
	+	27	84838	36460	03419	16326	94981 632	
	—		5768	57451	07886	60535	89081 088	
76 95	.93516	61238	50858	36985	64182	43409	550	
	+	27	79069	79008	95532	55791	05900 544	
	—		5770	28878	06649	90025	37061 376	

c	Sine							
77 00'	.93544	40308	29867	32518	19973	49309	975	
	+	27	73299	50130	88882	65765	68839 168	
	—		5771	99949	11372	80907	65265 920	
77 05	.93572	13607	79998	21400	85739	18149	477	
	+	27	67527	50181	77509	84858	03573 248	
	—		5773	70664	11502	81011	58692 864	
77 10	.93599	81135	30179	98910	70597	21722	673	
	+	27	61753	79517	66007	03846	44880 384	
	—		5775	41022	96509	34436	20322 304	
77 15	.93627	42889	09697	64917	74443	66603	496	
	+	27	55978	38494	69497	69410	24558 080	
	—		5777	11025	55883	82200	28924 928	
77 20	.93654	98867	48192	34415	43853	91161	809	
	+	27	50201	27469	13613	87209	95633 152	
	—		5778	80671	79139	62890	61307 392	
77 25	.93682	49068	75661	48029	31063	86794	372	
	+	27	44422	46797	34474	24319	34325 760	
	—		5780	49961	55812	13308	79020 032	
77 30	.93709	93491	22458	82503	55383	21120	257	
	+	27	38641	96835	78662	11010	55305 728	
	—		5782	18894	75458	69116	79458 304	
77 35	.93737	32133	19294	61165	66393	76425	793	
	+	27	32859	77941	03203	41893	75847 424	
	—		5783	87471	27658	65481	11362 048	
77 40	.93764	64992	97235	64369	08287	52272	961	
	+	27	27075	90469	75544	76412	64485 376	
	—		5785	55691	02013	37715	54557 952	
77 45	.93791	92068	87705	39913	84700	16758	815	
	+	27	21290	34778	73531	38697	09927 424	
	—		5787	23553	88146	21922	64099 840	

c	Sine							
77 50'	.93819	13359	22484	13445	23397	26685	926	
	+	27	15503	11224	85385	16774	45827 584	
	—		5788	91059	75702	55633	78537 472	
77 55	.93846	28862	33708	98830	40171	72513	753	
	+	27	09714	20165	09682	61140	67290 112	
	—		5790	58208	54349	78447	92481 792	
77 60	.93873	38576	53874	08513	01312	39804	304	
	+	27	03923	61956	55332	82692	74808 320	
	—		5792	25000	13777	32668	93276 160	
77 65	.93900	42500	15830	63845	84005	14612	340	
	+	26	98131	36956	41555	50023	81532 160	
	—		5793	91434	43696	63941	61823 744	
77 70	.93927	40631	52787	05401	34028	96144	598	
	+	26	92337	45521	97858	86082	19708 416	
	—		5795	57511	33841	21886	37496 320	
77 75	.93954	32968	98309	03260	20111	15852	766	
	+	26	86541	88010	64017	64195	82212 096	
	—		5797	23230	73966	60732	47079 424	
77 80	.93981	19510	86319	67277	84306	98064	605	
	+	26	80744	64779	90051	03463	35132 672	
	—		5798	88592	53850	39949	97734 400	
77 85	.94008	00255	51099	57328	87770	33198	078	
	+	26	74945	76187	36200	63513	37398 272	
	—		5800	53596	63292	24880	33954 816	
77 90	.94034	75201	27286	93529	51283	70595	865	
	+	26	69145	22590	72908	38633	03443 456	
	—		5802	18242	92113	87365	58386 176	
77 95	.94061	44346	49877	66437	89916	74039	341	
	+	26	63343	04347	80794	51267	45057 280	
	—		5803	82531	30159	06376	16614 400	

c	Sine							
78 00'	.94088	07689	54225	47232	41184	19096	970	
	+	26	57539	21816	50635	44891	28442 880	
	—		5805	46461	67293	68637	45770 496	
78 05	.94114	65228	76041	97867	86075	47538	982	
	+	26	51733	75354	83341	76253	82672 384	
	—		5807	10033	93405	69254	86928 896	
78 10	.94141	16962	51396	81209	62329	30212	348	
	+	26	45926	65320	89936	06998	95743 488	
	—		5808	73247	98405	12337	61340 416	
78 15	.94167	62889	16717	71145	69328	25955	025	
	+	26	40117	92072	91530	94661	34403 072	
	—		5810	36103	72224	11621	10340 096	
78 20	.94194	03007	08790	62676	63989	60358	478	
	+	26	34307	55969	19306	83040	24062 976	
	—		5811	98601	04816	91087	98995 456	
78 25	.94220	37314	64759	81983	47029	84421	325	
	+	26	28495	57368	14489	91952	25067 520	
	—		5813	60739	86159	85587	83404 032	
78 30	.94246	65810	22127	96473	38982	09488	468	
	+	26	22681	96628	28330	06364	41663 488	
	—		5815	22520	06251	41455	41599 232	
78 35	.94272	88492	18756	24803	45346	51152	839	
	+	26	16866	74108	22078	64909	00064 256	
	—		5816	83941	55112	17127	68081 920	
78 40	.94299	05358	92864	46882	10255	51216	223	
	+	26	11049	90166	66966	47781	31982 336	
	—		5818	45004	22784	83759	31823 104	
78 45	.94325	16408	83031	13848	58036	83198	875	
	+	26	05231	45162	44181	64022	00159 232	
	—		5820	05707	99334	25836	97875 968	

c	Sine							
78 50'	.94351	21640	28193	58030	22058	83358	184	
	+	25	99411	39454	44847	38185	02283 264	
	—		5821	66052	74847	41792	12360 704	
78 55	.94377	21051	67648	02877	60243	85641	746	
	+	25	93589	73401	69999	96392	89922 560	
	—		5823	26038	39433	44612	50954 240	
78 60	.94403	14641	41049	72877	56636	75563	803	
	+	25	87766	47363	30566	51780	38968 320	
	—		5824	85664	83223	62452	30727 168	
78 65	.94429	02407	88413	03444	08417	14532	455	
	+	25	81941	61698	47342	89328	08241 152	
	—		5826	44931	96371	39240	85369 856	
78 70	.94454	84349	50111	50786	97745	22773	917	
	+	25	76115	16766	50971	50087	22871 296	
	—		5828	03839	69052	35290	03729 920	
78 75	.94480	60464	66878	01758	47832	45645	001	
	+	25	70287	12926	81919	14797	19141 376	
	—		5829	62387	91464	27900	31605 760	
78 80	.94506	30751	79804	83677	62629	64786	466	
	+	25	64457	50538	90454	86896	87535 616	
	—		5831	20576	53827	11965	36836 096	
78 85	.94531	95209	30343	74132	49526	52322	099	
	+	25	58626	29962	36627	74931	50699 520	
	—		5832	78405	46383	00575	37549 312	
78 90	.94557	53835	60306	10760	24458	03021	122	
	+	25	52793	51556	90244	74356	13150 208	
	—		5834	35874	59396	25618	93607 424	
78 95	.94583	06629	11863	01004	98814	16171	798	
	+	25	46959	15682	30848	48737	19542 784	
	—		5835	92983	83153	38383	61183 232	

c	Sine						
79 00'	.94608	53588	27545	31853	47551	35714	458
	+	25	41123	22698	47695	10353	58359
	—		5837	49733	07963	10155	10431
79 05	.94633	94711	50243	79548	57904	94073	964
	+	25	35285	72965	39732	00198	47927
	—		5839	06122	24156	32815	06195
79 10	.94659	29997	23209	19280	58103	42002	154
	+	25	29446	66843	15575	67383	41732
	—		5840	62151	22086	19437	51794
79 15	.94684	59443	90052	34856	25486	83733	610
	+	25	23606	04691	93489	47945	89937
	—		5842	17819	92128	04883	95725
79 20	.94709	83049	94744	28345	73432	73671	223
	+	25	17763	86872	01361	43061	94211
	—		5843	73128	24679	46397	01366
79 25	.94735	00813	81616	29707	16494	67883	371
	+	25	11920	13743	76681	96664	92845
	—		5845	28076	10160	24192	79578
79 30	.94760	12733	95360	06389	13159	60728	381
	+	25	06074	85667	66521	72472	13266
	—		5846	82663	39012	42051	84161
79 35	.94785	18808	81027	72910	85631	73995	173
	+	25	00228	03004	27509	30420	29105
	—		5848	36890	01700	27908	70183
79 40	.94810	19036	84032	00420	16052	03101	148
	+	24	94379	66114	25809	02511	58921
	—		5849	90755	88710	34440	15089
79 45	.94835	13416	50146	26229	18563	62022	377
	+	24	88529	75358	37098	68071	43831
	—		5851	44260	90551	39652	02589

c	Sine							
79 50'	.94860	01946	25504	63327	86635	05853	506	
	+	24	82678	31097	46547	28419	856	
	—		5852	97404	97754	47464	69263 360	
79 55	.94884	84624	56602	09875	15054	47095	057	
	+	24	76825	33692	48792	80954	71978 496	
	—		5854	50188	00872	88297	13868 800	
79 60	.94909	61449	90294	58667	96009	19074	142	
	+	24	70970	83504	47919	92657	58109 696	
	—		5856	02609	90482	19649	69327 616	
79 65	.94934	32420	73799	06587	88666	77183	766	
	+	24	65114	80894	57437	73007	88782 080	
	—		5857	54670	57180	26685	37280 512	
79 70	.94958	97535	54693	64025	61674	65965	782	
	+	24	59257	26224	00257	46322	51501 568	
	—		5859	06369	91587	22809	85293 824	
79 75	.94983	56792	80917	64283	07997	17467	157	
	+	24	53398	19854	08670	23512	66207 744	
	—		5860	57707	84345	50250	06559 232	
79 80	.95008	10191	00771	72953	31509	83675	364	
	+	24	47537	62146	24324	73262	59648 512	
	—		5862	08684	26119	80631	42164 480	
79 85	.95032	57728	62917	97278	04772	43323	785	
	+	24	41675	53461	98204	92631	17484 032	
	—		5863	59299	07597	15553	65776 384	
79 90	.95056	99404	16379	95482	97403	60807	554	
	+	24	35811	94162	90607	77077	51707 648	
	—		5865	09552	19486	87165	30842 624	
79 95	.95081	35216	10542	86090	74481	12514	969	
	+	24	29946	84610	71120	89912	20865 024	
	—		5866	59443	52520	58736	80139 264	

c	Sine							
80 00'	.95105	65162	95153	57211	64393	33379	655	
	+	24	24080	25167	18600	31175	40725	760
	—		5868	08972	97452	25232	17720	320
80 05	.95129	89243	20320	75811	95568	74106	212	
	+	24	18212	16194	21148	05943	23005	440
	—		5869	58140	45058	13879	43227	392
80 10	.95154	07455	36514	96960	01511	97111	230	
	+	24	12342	58053	76089	92063	79778	048
	—		5871	06945	86136	84739	48432	384
80 15	.95178	19797	94568	73049	93575	76888	871	
	+	24	06471	51107	89953	07324	31345	664
	—		5872	55389	11509	31273	76126	976
80 20	.95202	26269	45676	63003	00900	08235	027	
	+	24	00598	95718	78443	76050	55218	688
	—		5874	03470	12018	80910	41201	152
80 25	.95226	26868	41395	41446	76950	63453	453	
	+	23	94724	92248	66424	95140	14017	536
	—		5875	51188	78530	95609	13924	096
80 30	.95250	21593	33644	07871	72090	77471	026	
	+	23	88849	41059	87893	99531	00093	440
	—		5876	98545	01933	72424	65386	496
80 35	.95274	10442	74703	95765	71621	77564	586	
	+	23	82972	42514	85960	27106	34706	944
	—		5878	45538	73137	44068	75090	944
80 40	.95297	93415	17218	81725	98728	12271	882	
	+	23	77093	96976	12822	83037	59616	000
	—		5879	92169	83074	79471	00613	632
80 45	.95321	70509	14194	94548	81765	71888	080	
	+	23	71214	04806	29748	03566	59002	368
	—		5881	38438	22700	84338	09326	080

c	Sine							
80 50'	.95345	41723	19001	24296	85332	30890	331	
	+	23	65332	66368	07047	19228	49676 288	
	—		5882	84343	82993	01711	72164 608	
80 55	.95369	07055	85369	31344	04560	80566	010	
	+	23	59449	82024	24054	17516	77511 680	
	—		5884	29886	54951	12525	19348 224	
80 60	.95392	66505	67393	55398	22077	58077	789	
	+	23	53565	52137	69103	04991	58163 456	
	—		5885	75066	29597	36158	58105 344	
80 65	.95416	20071	19531	24501	27069	16241	508	
	+	23	47679	77071	39505	68833	00058 112	
	—		5887	19882	97976	30992	52267 008	
80 70	.95439	67750	96602	64006	95902	16299	270	
	+	23	41792	57188	41529	37840	47791 104	
	—		5888	64336	51154	94960	63789 056	
80 75	.95463	09543	53791	05536	33742	64091	053	
	+	23	35903	92851	90374	42879	84002 048	
	—		5890	08426	80222	66100	56116 224	
80 80	.95486	45447	46642	95910	76622	48092	209	
	+	23	30013	84425	10151	76779	27885 824	
	—		5891	52153	76291	23103	59331 840	
80 85	.95509	75461	31068	06062	53401	75978	454	
	+	23	24122	32271	33860	53675	68553 984	
	—		5892	95517	30494	85862	97166 848	
80 90	.95532	99583	63339	39923	07077	44532	353	
	+	23	18229	36754	03365	67812	71387 136	
	—		5894	38517	33990	16020	75671 552	
80 95	.95556	17813	00093	43288	74890	15919	290	
	+	23	12334	98236	69375	51791	95715 584	
	—		5895	81153	77956	17513	33679 104	

c	Sine							
81 00'	.95579	30147	98330	12664	26682	11635	579	
	+	23	06439	17082	91419	34278	62036 480	
	—		5897	23426	53594	37115	54907 136	
81 05	.95602	36587	15413	04083	60960	73672	156	
	+	23	00541	93656	37824	97163	07129 344	
	—		5898	65335	52128	64983	41735 424	
81 10	.95625	37129	09069	41908	58123	80801	138	
	+	22	94643	28320	85696	32179	65393 920	
	—		5900	06880	64805	35195	50574 592	
81 15	.95648	31772	37390	27604	90303	46194	821	
	+	22	88743	21440	20890	96984	14819 328	
	—		5901	48061	82893	26292	88853 504	
81 20	.95671	20515	58830	48495	87287	61014	439	
	+	22	82841	73378	37997	70691	25965 824	
	—		5902	88878	97683	61817	73528 064	
81 25	.95694	03357	32208	86493	57978	86980	087	
	+	22	76938	84499	40314	08873	52437 760	
	—		5904	29332	00490	10850	51114 496	
81 30	.95716	80296	16708	26807	66852	39417	756	
	+	22	71034	55167	39823	98023	01323 264	
	—		5905	69420	82648	88545	79211 264	
81 35	.95739	51330	71875	66631	64875	40741	060	
	+	22	65128	85746	57175	09477	22112 000	
	—		5907	09145	35518	56666	69472 768	
81 40	.95762	16459	57622	23806	74352	62853	185	
	+	22	59221	76601	21656	52810	52639 232	
	—		5908	48505	50480	24117	91997 952	
81 45	.95784	75681	34223	45463	27163	15491	942	
	+	22	53313	28095	71176	28692	60641 280	
	—		5909	87501	18937	47477	41084 672	

c	Sine						
81 50'	.95807	28994	62319	16639	55855	76133	442
	+	22	47403	40594	52238	81215	19556 608
	—		5911	26132	32316	31526	62392 832
81 55	.95829	76398	02913	68878	37070	95690	115
	+	22	41492	14462	19922	49688	57163 776
	—		5912	64398	82065	29779	41348 352
81 60	.95852	17890	17375	88800	86759	52854	255
	+	22	35579	50063	37857	19909	15815 424
	—		5914	02300	59655	45009	52907 776
81 65	.95874	53469	67439	26658	06668	68668	987
	+	22	29665	47762	78201	74899	62907 648
	—		5915	39837	56580	29776	72515 584
81 70	.95896	83135	15202	04859	81568	31576	818
	+	22	23750	07925	21621	45122	90392 064
	—		5916	77009	64355	86951	48339 200
81 75	.95919	06885	23127	26481	26691	21969	245
	+	22	17833	30915	57265	58171	42052 864
	—		5918	13816	74520	70238	34652 672
81 80	.95941	24718	54042	83746	84862	64022	289
	+	22	11915	17098	82744	87933	07400 192
	—		5919	50258	78635	84697	86383 360
81 85	.95963	36633	71141	66491	72795	71422	620
	+	22	05995	66840	04109	03235	21016 832
	—		5920	86335	68284	87267	14819 584
81 90	.95985	42629	37981	70600	76030	92438	731
	+	22	00074	80504	35824	15968	06197 248
	—		5922	22047	35073	87279	04345 088
81 95	.96007	42704	18486	06424	91998	98635	847
	+	21	94152	58457	00750	28689	01852 160
	—		5923	57393	70631	46979	90305 792

c	Sine						
82 00'	.96029	36856	76943	07175	20688	00488	758
	+	21	88229	01063	30118	81709	11546 368
	—		5924	92374	66608	82045	97859 328
82 05	.96051	25085	78006	37294	02397	12035	184
	+	21	82304	08688	63509	99663	13687 040
	—		5926	26990	14679	62098	41832 960
82 10	.96073	07389	86695	00804	02060	25722	190
	+	21	76377	81698	48830	37564	71854 080
	—		5927	61240	06540	11216	87548 928
82 15	.96094	83767	68393	49634	39624	97575	749
	+	21	70450	20458	42290	26347	84305 152
	—		5928	95124	33909	08451	72589 568
82 20	.96116	54217	88851	91924	65972	81880	789
	+	21	64521	25334	08381	17896	11715 584
	—		5930	28642	88527	88334	89453 056
82 25	.96138	18739	14186	00305	83868	93596	578
	+	21	58590	96691	19853	29561	22262 528
	—		5931	61795	62160	41389	29084 416
82 30	.96159	77330	10877	20159	13430	15858	987
	+	21	52659	34895	57692	88171	93178 112
	—		5932	94582	46593	14636	85252 096
82 35	.96181	29989	45772	77852	01602	09037	545
	+	21	46726	40313	11099	73535	07926 016
	—		5934	27003	33635	12105	19716 864
82 40	.96202	76715	86085	88951	75137	16963	213
	+	21	40792	13309	77464	61429	88209 152
	—		5935	59058	15117	95332	88197 120
82 45	.96224	17507	99395	66416	36567	05172	748
	+	21	34856	54251	62346	66097	00012 032
	—		5936	90746	82895	83873	27055 872

c	Sine							
82 50'	.96245	52364	53647	28763	02664	05184	857	
	+	21	28919	63504	79450	82223	72956	160
	—		5938	22069	28845	55797	00741	120
82 55	.96266	81284	17152	08213	84887	78140	850	
	+	21	22981	41435	50605	26426	72215	040
	—		5939	53025	44866	48193	09842	432
82 60	.96288	04265	58587	58819	11314	50355	991	
	+	21	17041	88410	05738	78233	62372	608
	—		5940	83615	22880	57668	59887	616
82 65	.96309	21307	46997	64557	89548	12728	105	
	+	21	11101	04794	82858	20565	02484	992
	—		5942	13838	54832	40846	90678	784
82 70	.96330	32408	51792	47416	10113	15213	159	
	+	21	05158	90956	28025	79718	11806	208
	—		5943	43695	32689	14864	66272	256
82 75	.96351	37567	42748	75441	89831	27019	752	
	+	20	99215	47260	95336	64853	45533	952
	—		5944	73185	48440	57867	25501	952
82 80	.96372	36782	90009	70778	54684	72553	510	
	+	20	93270	74075	46896	06986	20032	000
	—		5946	02308	94099	09502	93022	720
82 85	.96393	30053	64085	17674	61670	92585	434	
	+	20	87324	71766	52796	97483	27009	280
	—		5947	31065	61699	71415	50873	600
82 90	.96414	17378	35851	70471	59154	19594	329	
	+	20	81377	40700	91097	26067	76135	680
	—		5948	59455	43300	07735	70479	104
82 95	.96434	98755	76552	61568	85221	95730	910	
	+	20	75428	81245	47797	18332	05656	576
	—		5949	87478	30980	45571	05142	784

c	Sine							
83 00'	.96455	74184	57798	09366	03554	01387	233	
	+	20	69478	93767	16816	72761	00513 792	
	—		5951	15134	16843	75494	42874 368	
83 05	.96476	43663	51565	26182	76315	01900	684	
	+	20	63527	78632	99972	97266	57639 424	
	—		5952	42422	93015	52031	19659 008	
83 10	.96497	07191	30198	26155	73581	59539	837	
	+	20	57575	36210	06957	45235	37980 416	
	—		5953	69344	51643	94144	93045 760	
83 15	.96517	64766	66408	33113	18816	97521	101	
	+	20	51621	66865	55313	51090	44934 656	
	—		5954	95898	84899	85721	76062 464	
83 20	.96538	16388	33273	88426	69907	42455	514	
	+	20	45666	70966	70413	65368	68872 192	
	—		5956	22085	84976	76053	31401 728	
83 25	.96558	62055	04240	58840	35276	11327	577	
	+	20	39710	48880	85436	89315	37470 464	
	—		5957	47905	44090	80318	25894 400	
83 30	.96579	01765	53121	44277	24591	48797	940	
	+	20	33753	00975	41346	08997	11576 064	
	—		5958	73357	54480	80062	45190 656	
83 35	.96599	35518	54096	85623	33588	60373	987	
	+	20	27794	27617	86865	28934	66385 408	
	—		5959	98442	08408	23677	68640 512	
83 40	.96619	63312	81714	72488	62523	26759	575	
	+	20	21834	29175	78457	05256	97744 896	
	—		5961	23158	98157	26879	04357 376	
83 45	.96639	85147	10890	50945	67780	24504	221	
	+	20	15873	06016	80299	78377	93387 520	
	—		5962	47508	16034	73180	84405 248	

c	Sine							
83 50'	.96660	01020	16907	31245	46158	17892	089	
	+	20	09910	58508	64265	05197	08982 272	
	—		5963	71489	54370	14371	20118 784	
83 55	.96680	10930	75415	95510	51355	26873	834	
	+	20	03946	87019	09894	90825	88863 488	
	—		5964	95103	05515	70985	17467 136	
83 60	.96700	14877	62435	05405	42181	15737	760	
	+	19	97981	91916	04379	19840	71396 352	
	—		5966	18348	61846	32776	52521 984	
83 65	.96720	12859	54351	09784	62021	87133	863	
	+	19	92015	73567	42532	87064	18874 368	
	—		5967	41226	15759	59188	06898 688	
83 70	.96740	04875	27918	52317	49086	06008	283	
	+	19	86048	32341	26773	27876	11975 680	
	—		5968	63735	59675	79820	63221 760	
83 75	.96759	90923	60259	79090	76962	17983	490	
	+	19	80079	68605	67097	48055	48753 920	
	—		5969	85876	86037	94900	60554 240	
83 80	.96779	71003	28865	46188	25017	66737	635	
	+	19	74109	82728	81059	53154	88199 680	
	—		5971	07649	87311	75746	09735 680	
83 85	.96799	45113	11594	27247	78172	54938	004	
	+	19	68138	75078	93747	77408	78464 000	
	—		5972	29054	55985	65231	68684 032	
83 90	.96819	13251	86673	20995	55581	33401	773	
	+	19	62166	46024	37762	12177	09779 968	
	—		5973	50090	84570	78251	77496 576	
83 95	.96838	75418	32697	58757	67758	43181	647	
	+	19	56192	95933	53191	33925	32283 392	
	—		5974	70758	65601	02182	53486 080	

c	Sine						
84 00'	.96858	31611	28631	11949	01683	75464	808
	+	19	50218	25174	87590	31742	78797 312
	—		5975	91057	91632	97342	45975 040
84 05	.96877	81829	53805	99539	33426	54261	889
	+	19	44242	34116	95957	34400	32822 272
	—		5977	10988	55245	97451	50911 488
84 10	.96897	26071	87922	95496	67826	87084	280
	+	19	38265	23128	40711	36948	81910 784
	—		5978	30550	49042	10088	85254 144
84 15	.96916	64337	11051	36208	04775	68995	773
	+	19	32286	92577	91669	26859	96656 640
	—		5979	49743	65646	17149	21074 688
84 20	.96935	96624	03629	27877	31635	65652	443
	+	19	26307	42834	26023	09710	75581 952
	—		5980	68567	97705	75297	79389 440
84 25	.96955	22931	46463	53900	41346	41234	143
	+	19	20326	74266	28317	34412	96192 512
	—		5981	87023	37891	16423	83648 768
84 30	.96974	43258	20729	82217	75759	37426	473
	+	19	14344	87242	90426	17989	12543 744
	—		5983	05109	78895	48092	72916 992
84 35	.96993	57603	07972	72643	93748	49970	194
	+	19	08361	82133	11530	69896	39626 752
	—		5984	22827	13434	53996	74619 904
84 40	.97012	65964	90105	84174	63644	89597	119
	+	19	02377	59305	98096	15899	65006 848
	—		5985	40175	34246	94404	36956 160
84 45	.97031	68342	49411	82270	79544	54603	713
	+	18	96392	19130	63849	21495	28050 688
	—		5986	57154	34094	06608	20819 968

c	Sine						
84 50'	.97050	64734	68542	46120	01039	82654	409
	+	18	90405	61976	29755	14887	07230 720
	—		5987	73764	05760	05371	51297 536
84 55	.97069	55140	30518	75875	15926	89885	366
	+	18	84417	88212	23995	09515	55933 184
	—		5988	90004	42051	83373	28678 912
84 60	.97088	39558	18730	99870	25442	45818	755
	+	18	78428	98207	81943	26142	27254 272
	—		5990	05875	35799	11651	98934 016
84 65	.97107	17987	16938	81813	51584	73072	488
	+	18	72438	92332	46144	14490	28320 256
	—		5991	21376	79854	40047	83661 056
84 70	.97125	90426	09271	27957	66075	01392	953
	+	18	66447	70955	66289	74442	44659 200
	—		5992	36508	67092	97643	69486 848
84 75	.97144	56873	80226	94247	40517	46052	607
	+	18	60455	34446	99196	76798	75172 352
	—		5993	51270	90412	93204	56830 976
84 80	.97163	17329	14673	93444	17316	21224	566
	+	18	54461	83176	08783	83594	18341 376
	—		5994	65663	42735	15615	68075 776
84 85	.97181	71790	97850	02228	00910	39566	276
	+	18	48467	17512	66048	67978	50265 600
	—		5995	79686	17003	34319	15092 992
84 90	.97200	20258	15362	68276	68888	89831	239
	+	18	42471	37826	49045	33659	35172 608
	—		5996	93339	06183	99749	26057 472
84 95	.97218	62729	53189	17322	02548	25004	508
	+	18	36474	44487	42861	33910	09115 136
	—		5998	06622	03266	43766	31611 392

c	Sine							
85 00'	.97236	99203	97676	60183	36458	34118	691	
	+	18	30476	37865	39594	90143	77503 744	
	—		5999	19535	01262	80089	10239 744	
85 05	.97255	29680	35541	99778	26602	11622	606	
	+	18	24477	18330	38332	10054	67264 000	
	—		6000	32077	93208	04725	92946 176	
85 10	.97273	54157	53872	38110	36656	78887	039	
	+	18	18476	86252	45124	05328	74317 824	
	—		6001	44250	72159	96404	27100 160	
85 15	.97291	72634	40124	83234	41985	53205	041	
	+	18	12475	42001	72964	08924	47217 664	
	—		6002	56053	31199	16998	99501 568	
85 20	.97309	85109	82126	56198	50910	00421	976	
	+	18	06472	85948	41764	91925	47716 096	
	—		6003	67485	63429	11959	18595 072	
85 25	.97327	91582	68074	97963	42835	48138	243	
	+	18	00469	18462	78335	79966	29121 024	
	—		6004	78547	61976	10733	55835 392	
85 30	.97345	92051	86537	76299	22801	77259	779	
	+	17	94464	39915	16359	69232	73285 632	
	—		6005	89239	19989	27194	46148 096	
85 35	.97363	86516	26452	92658	92034	50545	461	
	+	17	88458	50675	96370	42038	27137 536	
	—		6006	99560	30640	60060	47500 288	
85 40	.97381	74974	77128	89029	34072	77682	365	
	+	17	82451	51115	65729	81977	79637 248	
	—		6008	09510	87124	93317	59480 832	
85 45	.97399	57426	28244	54759	16050	57319	916	
	+	17	76443	41604	78604	88660	20156 416	
	—		6009	19090	82659	96639	00986 368	

c	Sine							
85 50'	.97417	33869	69849	33364	04710	77476	765	
	+	17	70434	22513	95944	92021	19170 048	
	—		6010	28300	10486	25803	46856 448	
85 55	.97435	04303	92363	29308	96731	96646	130	
	+	17	64423	94213	85458	66217	72313 600	
	—		6011	37138	63867	23112	23501 824	
85 60	.97452	68727	86577	14767	62949	68960	223	
	+	17	58412	57075	21591	43105	48811 776	
	—		6012	45606	36089	17804	63510 528	
85 65	.97470	27140	43652	36359	06055	17772	258	
	+	17	52400	11468	85502	25300	85301 248	
	—		6013	53703	20461	26472	19167 232	
85 70	.97487	79540	55121	21861	31356	03073	085	
	+	17	46386	57765	65040	98828	66134 016	
	—		6014	61429	10315	53471	34867 456	
85 75	.97505	25927	12886	86902	30184	69207	083	
	+	17	40371	96336	54725	45357	31266 560	
	—		6015	68783	99006	91334	78441 984	
85 80	.97522	66299	09223	41627	75542	00473	581	
	+	17	34356	27552	55718	54022	52824 576	
	—		6016	75767	79913	21181	31296 256	
85 85	.97540	00655	36775	97346	29564	53298	157	
	+	17	28339	51784	75805	32841	21528 320	
	—		6017	82380	46435	13124	37416 960	
85 90	.97557	28994	88560	73151	62405	74826	376	
	+	17	22321	69404	29370	19716	84111 360	
	—		6018	88621	91996	26679	11148 544	
85 95	.97574	51316	57965	02521	82122	58937	880	
	+	17	16302	80782	37373	93037	72962 816	
	—		6019	94492	10043	11168	03768 320	

c	Sine						
86 00'	.97591	67619	38747	39895	75160	31900	648
	+	17	10282	86290	27330	81869	69194 496
	—		6020	99990	94045	06125	28814 080
86 05	.97608	77902	25037	67226	57030	01095	263
	+	17	04261	86299	33285	75744	40380 416
	—		6022	05118	37494	41699	46123 264
86 10	.97625	82164	11337	00512	32774	41475	129
	+	16	98239	81180	95791	34044	94257 152
	—		6023	09874	33906	39055	04593 920
86 15	.97642	80403	92517	96303	66819	35732	471
	+	16	92216	71306	61884	94989	89663 232
	—		6024	14258	76819	10772	43623 424
86 20	.97659	72620	63824	58188	61809	25395	779
	+	16	86192	57047	85065	84217	46039 808
	—		6025	18271	59793	61246	53180 928
86 25	.97676	58813	20872	43254	46026	71435	600
	+	16	80167	38776	25272	22970	92858 880
	—		6026	21912	76413	87083	92537 088
86 30	.97693	38980	59648	68526	68997	64294	199
	+	16	74141	16863	48858	35887	00321 792
	—		6027	25182	20286	77498	67570 176
86 35	.97710	13121	76512	17385	04884	64616	927
	+	16	68113	91681	28571	58388	32751 616
	—		6028	28079	85042	14706	66692 608
86 40	.97726	81235	68193	45956	63272	97368	020
	+	16	62085	63601	43529	43681	66059 008
	—		6029	30605	64332	74318	55272 960
86 45	.97743	43321	31794	89486	06954	63427	125
	+	16	56056	32995	79196	69363	10786 048
	—		6030	32759	51834	25731	28660 992

c	Sine							
86 50'	.97759	99377	64790	68682	76317	74212	706	
	+	16	50026	00236	27362	43631	82125 056	
	—		6031	34541	41245	32518	23653 888	
86 55	.97776	49403	65026	96045	19949	56338	606	
	+	16	43994	65694	86117	11113	58471 168	
	—		6032	35951	26287	52817	88506 112	
86 60	.97792	93398	30721	82162	31063	14809	597	
	+	16	37962	29743	59829	58295	69965 056	
	—		6033	36989	00705	39721	11345 664	
86 65	.97809	31360	60465	41991	89358	84774	709	
	+	16	31928	92754	59124	18574	58619 392	
	—		6034	37654	58266	41657	07062 272	
86 70	.97825	63289	53220	01116	07933	43393	784	
	+	16	25894	55100	00857	76917	51557 120	
	—		6035	37947	92761	02777	62594 816	
86 75	.97841	89184	08320	01973	84850	94951	121	
	+	16	19859	17152	08096	74139	88962 304	
	—		6036	37868	98002	63340	40606 720	
86 80	.97858	09043	25472	10070	58990	83912	771	
	+	16	13822	79283	10094	10799	48355 584	
	—		6037	37417	67827	60090	41524 736	
86 85	.97874	22866	04755	20164	69790	32268	717	
	+	16	07785	41865	42266	50709	06830 848	
	—		6038	36593	96095	26640	23929 856	
86 90	.97890	30651	46620	62431	20499	39099	384	
	+	16	01747	05271	46171	24068	82900 992	
	—		6039	35397	76687	93848	83238 912	
86 95	.97906	32398	51892	08602	44568	22001	071	
	+	15	95707	69873	69483	30219	99662 080	
	—		6040	33829	03510	90198	88729 088	

c	Sine							
87 00'	.97922	28106	21765	78085	74788	21663	062	
	+	15	89667	36044	65972	40021	10932 992	
	—		6041	31887	70492	42172	78771 200	
87 05	.97938	17773	57810	44058	14809	32596	154	
	+	15	83626	04156	95479	97848	32161 792	
	—		6042	29573	71583	74627	14362 880	
87 10	.97954	01399	61967	39538	12657	64757	291	
	+	15	77583	74583	23896	23221	17798 912	
	—		6043	26887	00759	11165	90855 168	
87 15	.97969	78983	36550	63434	35878	82556	674	
	+	15	71540	47696	23137	12055	26943 744	
	—		6044	23827	52015	74512	07912 448	
87 20	.97985	50523	84246	86571	47934	09499	953	
	+	15	65496	23868	71121	37543	19031 296	
	—		6045	20395	19373	86877	97599 232	
87 25	.98001	16020	08115	57692	85477	28531	607	
	+	15	59451	03473	51747	50665	21432 064	
	—		6046	16589	96876	70334	10676 736	
87 30	.98016	75471	11589	09440	36142	49963	888	
	+	15	53404	86883	54870	80331	10755 328	
	—		6047	12411	78590	47176	61019 136	
87 35	.98032	28875	98472	64311	16473	60718	422	
	+	15	47357	74471	76280	33154	49736 192	
	—		6048	07860	58604	40293	28092 160	
87 40	.98047	76233	72944	40591	49628	10454	981	
	+	15	41309	66611	17675	92861	21644 032	
	—		6049	02936	31030	73528	17608 704	
87 45	.98063	17543	39555	58267	42489	32098	563	
	+	15	35260	63674	86645	19333	04035 328	
	—		6049	97638	90004	72044	80161 792	

c	Sine							
87 50'	.98078	52804	03230	44912	61822	36134	379	
	+	15	29210	66035	96640	47288	536	
	—		6050	91968	29684	62687	87961 856	
87 55	.98093	82014	69266	41553	09110	60007	710	
	+	15	23159	74067	66955	84600	35911 680	
	—		6051	85924	44251	74343	69557 504	
87 60	.98109	05174	43334	08508	93710	95919	544	
	+	15	17107	88143	22704	10256	66354 176	
	—		6052	79507	27910	38299	02584 832	
87 65	.98124	22282	31477	31213	03967	62273	868	
	+	15	11055	08635	94793	71957	63769 344	
	—		6053	72716	74887	88598	64455 168	
87 70	.98139	33337	40113	26006	75925	26043	267	
	+	15	05001	35919	19905	83358	99314 176	
	—		6054	65552	79434	62401	41047 808	
87 75	.98154	38338	76032	45912	59284	25357	791	
	+	14	98946	70366	40471	20957	58266 368	
	—		6055	58015	35824	00334	93283 840	
87 80	.98169	37285	46398	86383	80241	83623	353	
	+	14	92891	12351	04647	20622	64982 528	
	—		6056	50104	38352	46848	81640 448	
87 85	.98184	30176	58749	91031	00864	48605	775	
	+	14	86834	62246	66294	73773	83342 080	
	—		6057	41819	81339	50566	48549 376	
87 90	.98199	17011	20996	57325	74638	31948	619	
	+	14	80777	20426	84955	23207	34792 704	
	—		6058	33161	59127	64635	58668 288	
87 95	.98213	97788	41423	42280	97845	66740	979	
	+	14	74718	87265	25827	58571	76124 416	
	—		6059	24129	66082	47076	96962 560	

c	Sine						
88 00'	.98228	72507	28688	68108	56417	42865	444
	+	14	68659	63135	59745	11494	856
	—		6060	14723	96592	61132	24667 136
88 05	.98243	41166	91824	27853	67912	22027	365
	+	14	62599	48411	63152	50362	54494 720
	—		6061	04944	45069	75609	93003 520
88 10	.98258	03766	40235	91006	18274	76522	424
	+	14	56538	43467	18082	74752	61491 200
	—		6061	94791	05948	65230	14703 104
88 15	.98272	60304	83703	09088	93027	38012	981
	+	14	50476	48676	12134	09522	46788 096
	—		6062	84263	73687	10967	93277 440
88 20	.98287	10781	32379	21223	02549	84801	111
	+	14	44413	64412	38446	98554	53510 656
	—		6063	73362	42766	00395	10031 360
88 25	.98301	55194	96791	59670	01104	38312	331
	+	14	38349	91049	95680	98159	43479 296
	—		6064	62087	07689	28020	68808 704
88 30	.98315	93544	87841	55350	99263	81791	647
	+	14	32285	28962	87991	70138	74670 592
	—		6065	50437	62983	95629	98400 000
88 35	.98330	25830	16804	43342	69402	56461	739
	+	14	26219	78525	25007	74508	76270 592
	—		6066	38414	03200	12622	12652 032
88 40	.98344	52049	95329	68350	43911	32732	817
	+	14	20153	40111	21807	61886	63618 560
	—		6067	26016	22910	96346	28251 648
88 45	.98358	72203	35440	90158	05797	96350	730
	+	14	14086	14094	98896	65540	35366 912
	—		6068	13244	16712	72436	40061 952

c	Sine							
88 50'	.98372	86289	49535	89054	71338	31718	341	
	+	14	08018	00850	82183	93103	95304	960
	—		6069	00097	79224	75144	54201	344
88 55	.98386	94307	50386	71238	64442	27022	418	
	+	14	01949	00753	02959	17959	41103	616
	—		6069	86577	05089	47672	78568	448
88 60	.98400	96256	51139	74197	82401	68126	969	
	+	13	95879	14175	97869	70286	62535	168
	—		6070	72681	88972	42503	71080	192
88 65	.98414	92135	65315	72067	52688	30661	413	
	+	13	89808	41494	08897	27782	91454	976
	—		6071	58412	25562	21729	45334	272
88 70	.98428	81944	06809	80964	80471	22116	681	
	+	13	83736	83081	83335	06053	46120	704
	—		6072	43768	09570	57379	33919	232
88 75	.98442	65680	89891	64299	86524	68236	884	
	+	13	77664	39313	73764	48674	12201	472
	—		6073	28749	35732	31746	09131	520
88 80	.98456	43345	29205	38064	35198	80438	827	
	+	13	71591	10564	38032	16928	03069	952
	—		6074	13355	98805	37710	61275	648
88 85	.98470	14936	39769	76096	52126	83508	837	
	+	13	65516	97208	39226	79217	41794	304
	—		6074	97587	93570	79065	34358	016
88 90	.98483	80453	36978	15323	31344	25303	316	
	+	13	59441	99620	45656	00152	07436	288
	—		6075	81445	14832	70836	19294	208
88 95	.98497	39895	36598	60979	31496	32739	228	
	+	13	53366	18175	30823	29315	88142	080
	—		6076	64927	57418	39603	04500	736

c	Sine							
89 00'	.98510	93261	54773	91802	60812	20881	856	
	+	13	47289	53247	73404	89712	83641 344	
	—		6077	48035	16178	23818	83929 600	
89 05	.98524	40551	08021	65207	50525	04522	995	
	+	13	41212	05212	57226	65893	99711 744	
	—		6078	30767	85985	74127	22486 272	
89 10	.98537	81763	13234	22434	16419	04234	863	
	+	13	35133	74444	71240	91766	77225 472	
	—		6079	13125	61737	53678	78806 528	
89 15	.98551	16896	87678	93675	08185	81459	793	
	+	13	29054	61319	09503	38087	98418 944	
	—		6079	95108	38353	38445	85403 392	
89 20	.98564	45951	48998	03178	46273	79878	634	
	+	13	22974	66210	71149	99642	13015 552	
	—		6080	76716	10776	17535	86145 280	
89 25	.98577	68926	15208	74328	45915	92894	468	
	+	13	16893	89494	60373	82106	26870 272	
	—		6081	57948	73971	93503	31041 792	
89 30	.98590	85820	04703	34702	28022	19764	537	
	+	13	10812	31545	86401	88602	95828 480	
	—		6082	38806	22929	82660	28323 840	
89 35	.98603	96632	36249	21104	16625	15592	958	
	+	13	04729	92739	63472	05942	67504 640	
	—		6083	19288	52662	15385	53803 776	
89 40	.98617	01362	28988	84576	22567	83097	782	
	+	12	98646	73451	10809	90557	13700 864	
	—		6083	99395	58204	36432	17504 256	
89 45	.98630	00009	02439	95386	13124	96798	543	
	+	12	92562	74055	52605	54124	96196 608	
	—		6084	79127	34615	05233	87492 352	

c	Sine						
89 50'	.98642	92571	76495	47991	67249	92995	046
	+	12	86477	94928	17990	48891	08704 256
	—		6085	58483	76975	96209	70959 872
89 55	.98655	79049	71423	65982	16141	01699	907
	+	12	80392	36444	41014	52681	37744 384
	—		6086	37464	80391	99067	52515 072
89 60	.98668	59442	07868	06996	68822	39443	534
	+	12	74305	98979	60622	53613	85229 312
	—		6087	16070	39991	19105	89596 672
89 65	.98681	33748	06847	67619	22436	24673	023
	+	12	68218	82909	20631	34507	95632 640
	—		6087	94300	50924	77514	65133 056
89 70	.98694	01966	89756	88250	56944	20306	255
	+	12	62130	88608	69706	56993	30499 584
	—		6088	72155	08367	11673	97278 720
89 75	.98706	64097	78365	57957	13937	50805	236
	+	12	56042	16453	61339	45319	33220 864
	—		6089	49634	07515	75452	06306 816
89 80	.98719	20139	94819	19296	59256	84026	235
	+	12	49952	66819	53823	69867	26914 048
	—		6090	26737	43591	39501	38600 448
89 85	.98731	70092	61638	73120	29124	10940	095
	+	12	43862	40082	10232	30365	88313 600
	—		6091	03465	11837	91553	47750 912
89 90	.98744	13955	01720	83352	59489	99253	814
	+	12	37771	36616	98394	38812	40562 688
	—		6091	79817	07522	36712	32686 080
89 95	.98756	51726	38337	81746	98302	39816	909
	+	12	31679	56799	90872	02100	07876 608
	—		6092	55793	25934	97746	32907 776

c	Sine							
90 00'	.98768	83405	95137	72619	00402	47693	677	
	+	12	25587	01006	64937	04353	74968 832	
	—		6093	31393	62389	15378	80705 024	
90 05	.98781	08992	96144	37556	04756	22662	561	
	+	12	19493	69613	02547	88974	94263 808	
	—		6094	06618	12221	48577	10434 304	
90 10	.98793	28486	65757	40103	93731	16925	865	
	+	12	13399	62994	90326	40397	83829 504	
	—		6094	81466	70791	74840	24769 536	
90 15	.98805	41886	28752	30430	34129	00755	443	
	+	12	07304	81528	19534	65557	59059 968	
	—		6095	55939	33482	90485	17929 984	
90 20	.98817	49191	10280	49964	99686	59815	773	
	+	12	01209	25588	86051	75072	41129 984	
	—		6096	30035	95701	10931	55918 848	
90 25	.98829	50400	35869	36016	74759	00945	186	
	+	11	95112	95552	90350	64140	85211 136	
	—		6097	03756	52875	70985	13616 896	
90 30	.98841	45513	31422	26367	38899	86156	316	
	+	11	89015	91796	37474	93155	71594 240	
	—		6097	77101	00459	25119	68916 480	
90 35	.98853	34529	23218	63842	32055	57750	904	
	+	11	82918	14695	37015	68036	02677 760	
	—		6098	50069	33927	47757	53671 680	
90 40	.98865	17447	37914	00858	00091	60428	259	
	+	11	76819	64626	03088	20278	49006 080	
	—		6099	22661	48779	33548	61599 744	
90 45	.98876	94267	02540	03946	20370	09434	714	
	+	11	70720	41964	54308	86729	87406 336	
	—		6099	94877	40536	97648	13032 448	

c	Sine							
90 50'	.98888	64987	44504	58255	07099	96840	810	
	+	11	64620	47087	13771	89081	74373 888	
	—		6100	66717	04745	75992	76540 928	
90 55	.98900	29607	91591	72026	96181	71214	345	
	+	11	58519	80370	09026	13088	97832 960	
	—		6101	38180	36974	25575	47389 952	
90 60	.98911	88127	71961	81053	09270	69047	349	
	+	11	52418	42189	72051	87513	50443 008	
	—		6102	09267	32814	24718	82832 896	
90 65	.98923	40546	14151	53104	96784	19490	633	
	+	11	46316	32922	39237	62794	67610 112	
	—		6102	79977	87880	73346	94204 416	
90 70	.98934	86862	47073	92342	59578	87101	002	
	+	11	40213	52944	51356	89447	73405 696	
	—		6103	50311	97811	93255	95805 696	
90 75	.98946	27076	00018	43699	49026	60506	572	
	+	11	34110	02632	53544	96191	77600 000	
	—		6104	20269	58269	28383	10574 080	
90 80	.98957	61186	02650	97244	45218	38106	211	
	+	11	28005	82362	95275	67808	67025 920	
	—		6104	89850	64937	45074	32489 984	
90 85	.98968	89191	85013	92520	13027	05132	899	
	+	11	21900	92512	30338	22734	34535 936	
	—		6105	59055	13524	32350	45771 264	
90 90	.98980	11092	77526	22858	35761	39668	702	
	+	11	15795	33457	16813	90383	88764 672	
	—		6106	27882	99761	02172	00717 824	
90 95	.98991	26888	10983	39672	26145	28433	357	
	+	11	09689	05574	17052	88211	88046 848	
	—		6106	96334	19401	89702	46363 136	

c	Sine						
91 00'	.99002	36577	16557	56725	14357	16480	000
	+	11	03582	09239	97650	98509	41683 712
	—		6107	64408	68224	53570	19715 584
91 05	.99013	40159	25797	54376	12866	58163	484
	+	10	97474	44831	29426	44939	21968 128
	—		6108	32106	42029	76128	91765 760
91 10	.99024	37633	70628	83802	57805	80131	675
	+	10	91366	12724	87396	68810	30202 368
	—		6108	99427	36641	63716	70102 016
91 15	.99035	28999	83353	71199	26616	10333	825
	+	10	85257	13297	50755	05093	60100 352
	—		6109	66371	47907	46913	58176 256
91 20	.99046	14256	96651	21954	31709	70434	545
	+	10	79147	46926	02847	58180	01924 096
	—		6110	32938	71697	80797	71233 280
91 25	.99056	93404	43577	24801	89889	72358	695
	+	10	73037	13987	31149	77382	30690 816
	—		6110	99129	03906	45200	08795 136
91 30	.99067	66441	57564	55951	67272	03049	852
	+	10	66926	14858	27243	32182	21895 680
	—		6111	64942	40450	44957	83817 216
91 35	.99078	33367	72422	83194	99454	24944	657
	+	10	60814	49915	86792	87224	38078 464
	—		6112	30378	77270	10166	08336 896
91 40	.99088	94182	22338	69987	86678	63023	437
	+	10	54702	19537	09522	77058	29741 568
	—		6112	95438	10328	96428	35781 632
91 45	.99099	48884	41875	79510	63736	92765	311
	+	10	48589	24098	99193	80629	93959 936
	—		6113	60120	35613	85105	59758 336

c	Sine							
91 50'	.99109	97473	65974	78704	44366	86724	814	
	+	10	42475	63978	63579	95524	34201 600	
	—		6114	24425	49134	83563	69404 928	
91 55	.99120	39949	29953	42284	39891	20926	707	
	+	10	36361	39553	14445	11960	64796 672	
	—		6114	88353	46925	25419	61275 392	
91 60	.99130	76310	69506	56729	51851	85722	896	
	+	10	30246	51199	67519	86541	03521 280	
	—		6115	51904	25041	70786	07690 752	
91 65	.99141	06557	20706	24249	38392	89244	429	
	+	10	24130	99295	42478	15754	95830 528	
	—		6116	15077	79564	06514	81632 768	
91 70	.99151	30688	20001	66727	54147	85075	352	
	+	10	18014	84217	62914	09240	14197 760	
	—		6116	77874	06595	46438	38062 592	
91 75	.99161	48703	04219	29641	63387	99272	958	
	+	10	11898	06343	56318	62801	76135 168	
	—		6117	40293	02262	31610	51732 992	
91 80	.99171	60601	10562	85960	26189	75407	950	
	+	10	05780	66050	54056	31191	24402 176	
	—		6118	02334	62714	30545	11424 512	
91 85	.99181	66381	76613	40016	57380	99810	806	
	+	9	99662	63715	91342	00646	12977 664	
	—		6118	63998	84124	39453	70640 384	
91 90	.99191	66044	40329	31358	58027	12788	036	
	+	9	93543	99717	07217	61192	42337 280	
	—		6119	25285	62688	82481	54677 248	
91 95	.99201	59588	40046	38576	19219	55124	973	
	+	9	87424	74431	44528	78710	87660 032	
	—		6119	86194	94627	11942	24126 976	

c	Sine							
92 00'	.99211	47013	14477	83104	97930	42785	743	
	+	9	81304	88236	49901	66768	63533 056	
	—		6120	46726	76182	08550	94773 760	
92 05	.99221	28318	02714	33006	64699	06318	198	
	+	9	75184	41509	73719	58217	68759 296	
	—		6121	06881	03619	81656	13814 784	
92 10	.99231	03502	44224	06726	22916	75077	388	
	+	9	69063	34628	70099	76561	54944 512	
	—		6121	66657	73229	69469	92500 736	
92 15	.99240	72565	78852	76825	99478	30022	501	
	+	9	62941	67970	96870	07091	62443 776	
	—		6122	26056	81324	39296	95078 400	
92 20	.99250	35507	46823	73696	06569	92466	125	
	+	9	56819	41914	15545	67794	67365 376	
	—		6122	85078	24239	87761	84077 312	
92 25	.99259	92326	88737	89241	74364	59831	528	
	+	9	50696	56835	91305	80032	83288 064	
	—		6123	43721	98335	41035	21908 736	
92 30	.99269	43023	45573	80547	54397	43119	682	
	+	9	44573	13113	92970	38997	61379 328	
	—		6124	01987	99993	55058	28777 984	
92 35	.99278	87596	58687	73517	93395	04498	510	
	+	9	38449	11125	92976	83939	32601 344	
	—		6124	59876	25620	15765	96857 856	
92 40	.99288	26045	69813	66494	77334	37099	676	
	+	9	32324	51249	67356	68173	35743 488	
	—		6125	17386	71644	39308	60776 448	
92 45	.99297	58370	21063	33851	45507	72843	467	
	+	9	26199	33862	95712	28864	74967 040	
	—		6125	74519	34518	72272	24326 144	

c	Sine							
92 50'	.99306	84569	54926	29563	74372	47810	405	
	+	9	20073	59343	61193	56592	50640 896	
	—		6126	31274	10718	91897	43439 872	
92 55	.99316	04643	14269	90757	30964	98451	271	
	+	9	13947	28069	50474	64695	07201 024	
	—		6126	87650	96744	06296	65403 904	
92 60	.99325	18590	42339	41231	95660	05652	987	
	+	9	07820	40418	53730	58398	41797 120	
	—		6127	43649	89116	54670	24281 600	
92 65	.99334	26410	82757	94962	54058	47449	240	
	+	9	01692	96768	64614	03728	17515 520	
	—		6127	99270	84382	07520	92537 856	
92 70	.99343	28103	79526	59576	57786	64964	627	
	+	8	95564	97497	80231	96207	24977 664	
	—		6128	54513	79109	66866	88880 640	
92 75	.99352	23668	77024	39808	53993	89942	320	
	+	8	89436	42984	01122	29340	36097 024	
	—		6129	09378	69891	66453	42259 200	
92 80	.99361	13105	20008	40930	83334	26039	841	
	+	8	83307	33605	31230	62886	93837 824	
	—		6129	63865	53343	71963	12044 544	
92 85	.99369	96412	53613	72161	46221	19877	404	
	+	8	77177	69739	77886	90923	81793 280	
	—		6130	17974	26104	81224	64343 040	
92 90	.99378	73590	23353	50048	37145	01671	280	
	+	8	71047	51765	51782	09699	17450 240	
	—		6130	71704	84837	24420	04500 480	
92 95	.99387	44637	75119	01830	46844	19120	820	
	+	8	64916	80060	66944	85279	12949 760	
	—		6131	25057	26226	64290	65651 200	

c	Sine							
93 00'	.99396	09554	55179	68775	32123	32071	265	
	+	8	58785	55003	40718	20988	47298 560	
	—		6131	78031	46981	96341	53492 480	
93 05	.99404	68340	10183	09493	53111	79369	824	
	+	8	52653	76971	93736	24646	93806 080	
	—		6132	30627	43835	49044	47048 704	
93 10	.99413	20993	87155	03229	77758	73175	756	
	+	8	46521	46344	49900	75602	46757 376	
	—		6132	82845	13542	84039	55623 936	
93 15	.99421	67515	33499	53130	53361	19932	574	
	+	8	40388	63499	36357	91562	91133 440	
	—		6133	34684	52882	96335	31751 424	
93 20	.99430	07903	96998	89488	44924	11066	402	
	+	8	34255	28814	83474	95227	59382 016	
	—		6133	86145	58658	14507	40290 560	
93 25	.99438	42159	25813	72963	40151	70447	914	
	+	8	28121	42669	24816	80720	19091 456	
	—		6134	37228	27694	00895	83493 120	
93 30	.99446	70280	68482	97780	20871	89539	589	
	+	8	21987	05440	97122	79824	35598 336	
	—		6134	87932	56839	51800	82183 168	
93 35	.99454	92267	73923	94903	00696	25138	411	
	+	8	15852	17508	40283	28023	53415 168	
	—		6135	38258	42966	97677	12921 600	
93 40	.99463	08119	91432	35186	28719	78553	426	
	+	8	09716	79249	97316	30346	40493 568	
	—		6135	88205	82972	03327	01209 600	
93 45	.99471	17836	70682	32502	59066	19046	718	
	+	8	03580	91044	14344	27019	39283 968	
	—		6136	37774	73773	68091	70683 904	

c	Sine						
93 50'	.99479	21417	61726	46846	86085	58331	182
	+	7	97444	53269	40570	58927	68600 064
	—		6136	86965	12314	26041	48324 352
93 55	.99487	18862	14995	87417	45013	26930	486
	+	7	91307	66304	28256	32886	20275 712
	—		6137	35776	95559	46164	25620 480
93 60	.99495	10169	81300	15673	77899	47206	908
	+	7	85170	30527	32696	86721	94655 232
	—		6137	84210	20498	32552	75734 016
93 65	.99502	95340	11827	48370	64621	41862	178
	+	7	79032	46317	12198	54169	18921 216
	—		6138	32264	84143	24590	26594 816
93 70	.99510	74372	58144	60569	18790	60782	951
	+	7	72894	14052	28055	29578	92326 400
	—		6138	79940	83529	97134	89964 032
93 75	.99518	47266	72196	88624	48369	53109	127
	+	7	66755	34111	44525	32444	02362 368
	—		6139	27238	15717	60702	46424 576
93 80	.99526	14022	06308	33149	80813	55472	082
	+	7	60616	06873	28807	71741	55937 792
	—		6139	74156	77788	61647	86298 880
93 85	.99533	74638	13181	61957	52555	11410	087
	+	7	54476	32716	51019	10093	69638 912
	—		6140	20696	66848	82345	06478 592
93 90	.99541	29114	45898	12976	62648	81048	130
	+	7	48336	12019	84170	27748	63160 320
	—		6140	66857	80027	41365	63154 944
93 95	.99548	77450	57917	97146	90397	44208	453
	+	7	42195	45162	04142	86383	00005 376
	—		6141	12640	14476	93655	80448 768

c	Sine						
94 00'	.99556	19646	03080	01289	76780	44214	638
	+	7	36054	32521	89665	92727	19556 608
	—		6141	58043	67373	30712	14919 680
94 05	.99563	55700	35601	90955	69507	63770	645
	+	7	29912	74478	22292	62015	04636 928
	—		6142	03068	35915	80755	75923 712
94 10	.99570	85613	10080	13248	31522	68407	657
	+	7	23770	71409	86376	81259	28713 216
	—		6142	47714	17327	08905	01869 568
94 15	.99578	09383	81489	99625	12781	97121	250
	+	7	17628	23695	69049	72354	26843 648
	—		6142	91981	08853	17346	92290 560
94 20	.99585	27012	05185	68674	85136	23964	403
	+	7	11485	31714	60196	55007	34553 088
	—		6143	35869	07763	45506	95760 896
94 25	.99592	38497	36900	28871	40143	58517	520
	+	7	05341	95845	52433	09500	38792 192
	—		6143	79378	11350	70217	53659 392
94 30	.99599	43839	32745	81304	49643	97309	953
	+	6	99198	16467	41082	39282	85132 800
	—		6144	22508	16931	05884	99714 048
94 35	.99606	43037	49213	22386	88926	82442	840
	+	6	93053	93959	24151	33397	85418 752
	—		6144	65259	21844	04655	15394 048
94 40	.99613	36091	43172	46538	22324	67861	367
	+	6	86909	28700	02307	28742	70024 704
	—		6145	07631	23452	56577	41065 216
94 45	.99620	23000	71872	48845	51067	37885	714
	+	6	80764	21068	78854	72165	28959 488
	—		6145	49624	19142	89767	42945 792

c	Sine							
94 50'	.99627	03764	92941	27700	23232	66846	074	
	+	6	74618	71444	59711	82397	86013 696	
	—		6145	91238	06324	70568	35843 072	
94 55	.99633	78383	64385	87412	05630	52859	847	
	+	6	68472	80206	53387	11829	50170 624	
	—		6146	32472	82431	03710	61651 456	
94 60	.99640	46856	44592	40799	17460	03029	984	
	+	6	62326	47733	70956	08118	88519 168	
	—		6146	73328	44918	32470	23597 568	
94 65	.99647	09182	92326	11755	25578	91548	791	
	+	6	56179	74405	26037	75648	64921 600	
	—		6147	13804	91266	38825	76240 640	
94 70	.99653	65362	66731	37793	01227	56471	004	
	+	6	50032	60600	34771	36822	88680 960	
	—		6147	53902	18978	43613	71236 352	
94 75	.99660	15395	27331	72564	38050	45151	350	
	+	6	43885	06698	15792	93209	17444 608	
	—		6147	93620	25581	06682	58751 488	
94 80	.99666	59280	34029	88357	31259	62596	836	
	+	6	37737	13077	90211	86526	58693 120	
	—		6148	32959	08624	27045	44711 680	
94 85	.99672	97017	47107	78569	17786	21289	554	
	+	6	31588	80118	81587	59481	13981 440	
	—		6148	71918	65681	43031	03626 240	
94 90	.99679	28606	27226	60156	77267	35271	120	
	+	6	25440	08200	15906	16450	10355 200	
	—		6149	10498	94349	32433	47238 912	
94 95	.99685	54046	35426	76062	93717	45625	634	
	+	6	19290	97701	21556	84016	63116 288	
	—		6149	48699	92248	12660	48760 832	

c	Sine						
95 00'	.99691	73337	33127	97619	77734	08742	046
	+	6	13141	49001	29308	71356	14355 456
	—		6149	86521	57021	40880	22864 896
95 05	.99697	86478	82129	26928	49090	23098	363
	+	6	06991	62479	72287	30475	91490 560
	—		6150	23963	86336	14166	61314 560
95 10	.99703	93470	44608	99215	79566	14588	061
	+	6	00841	38515	85951	16309	30176 000
	—		6150	61026	77882	69643	24234 240
95 15	.99709	94311	83124	85166	95875	44764	300
	+	5	94690	77489	08068	46666	05941 760
	—		6150	97710	29374	84625	87101 184
95 20	.99715	89002	60613	93235	42541	50705	944
	+	5	88539	79778	78693	62040	18840 576
	—		6151	34014	38549	76763	43307 264
95 25	.99721	77542	40392	71929	04581	69546	497
	+	5	82388	45764	40143	85276	75533 312
	—		6151	69939	03168	04177	62406 400
95 30	.99727	59930	86157	12072	89858	45080	428
	+	5	76236	75825	36975	81099	13126 912
	—		6152	05484	21013	65601	03980 032
95 35	.99733	36167	61982	49048	70957	58207	132
	+	5	70084	70341	15962	15498	09146 880
	—		6152	40649	89894	00513	87097 088
95 40	.99739	06252	32323	65010	86455	67354	050
	+	5	63932	29691	26068	14984	22049 792
	—		6152	75436	07639	89279	15428 864
95 45	.99744	70184	62014	91079	01439	89403	295
	+	5	57779	54255	18428	25705	06620 928
	—		6153	09842	72105	53276	57919 488

c	Sine							
95 50'	.99750	27964	16270	09507	27144	96024	264	
	+	5	51626	44412	46322	72428	48701 440	
	—		6153	43869	81168	55034	85090 816	
95 55	.99755	79590	60682	55829	99573	44725	961	
	+	5	45473	00542	65154	17393	63610 624	
	—		6153	77517	32729	98362	60905 984	
95 60	.99761	25063	61225	20984	16967	08336	607	
	+	5	39319	23025	32424	19031	02704 640	
	—		6154	10785	24714	28477	90226 432	
95 65	.99766	64382	84250	53408	35998	11041	249	
	+	5	33165	12240	07709	90553	12478 208	
	—		6154	43673	55069	32136	21827 584	
95 70	.99771	97547	96490	61118	26551	23519	277	
	+	5	27010	68566	52640	58416	90650 624	
	—		6154	76182	21766	37757	06986 496	
95 75	.99777	24558	65057	13758	84968	14170	518	
	+	5	20855	92384	30874	20659	83664 128	
	—		6155	08311	22800	15549	13630 208	
95 80	.99782	45414	57441	44633	05627	97833	767	
	+	5	14700	84073	08074	05110	70033 920	
	—		6155	40060	56188	77633	95993 600	
95 85	.99787	60115	41514	52707	10738	67868	072	
	+	5	08545	44012	51885	27476	74040 320	
	—		6155	71430	19973	78168	19876 864	
95 90	.99792	68660	85527	04592	38215	41908	314	
	+	5	02389	72582	31911	49308	54163 456	
	—		6156	02420	12220	13464	43371 520	
95 95	.99797	71050	58109	36503	87523	96072	302	
	+	4	96233	70162	19691	35844	10791 936	
	—		6156	33030	31016	22110	53172 736	

c	Sine							
96 00'	.99802	67284	28271	56195	23368	06863	846	
	+	4	90077	37131	88675	13733	57619 200	
	—		6156	63260	74473	85087	56328 448	
96 05	.99807	57361	65403	44870	37101	64483	535	
	+	4	83920	73871	14201	28646	01290 752	
	—		6156	93111	40728	25886	27601 408	
96 10	.99812	41282	39274	59071	65747	65774	309	
	+	4	77763	80759	73473	02759	73689 344	
	—		6157	22582	27938	10622	12233 216	
96 15	.99817	19046	20034	32544	68507	39463	057	
	+	4	71606	58177	45534	92137	61456 128	
	—		6157	51673	34285	48148	84261 888	
96 20	.99821	90652	78211	78079	60645	00919	771	
	+	4	65449	06504	11249	43988	77194 240	
	—		6157	80384	57975	90170	60327 424	
96 25	.99826	56101	84715	89329	04633	78113	623	
	+	4	59291	26119	53273	53818	16866 816	
	—		6158	08715	97238	31352	68917 248	
96 30	.99831	15393	10835	42602	58451	94980	384	
	+	4	53133	17403	56035	22465	47949 568	
	—		6158	36667	50325	09430	75137 536	
96 35	.99835	68526	28238	98637	80917	42929	432	
	+	4	46974	80736	05710	13034	72812 032	
	—		6158	64239	15512	05318	60909 056	
96 40	.99840	15501	08975	04347	93952	15741	825	
	+	4	40816	16496	90198	07716	11902 976	
	—		6158	91430	91098	43214	60660 224	
96 45	.99844	56317	25471	94546	01668	27644	474	
	+	4	34657	25065	99099	64501	51242 752	
	—		6159	18242	75406	90706	52437 504	

c	Sine							
96 50'	.99848	90974	50537	93645	66169	78887	604	
	+	4	28498	06823	23692	73794	98805 248	
	—		6159	44674	66783	58875	04506 880	
96 55	.99853	19472	57361	17338	39964	77692	546	
	+	4	22338	62148	56909	14919	94298 368	
	—		6159	70726	63598	02395	77345 024	
96 60	.99857	41811	19509	74247	54884	71990	926	
	+	4	16178	91421	93311	12524	16953 344	
	—		6159	96398	64243	19639	81121 536	
96 65	.99861	57990	10931	67558	67408	88944	530	
	+	4	10018	95023	29067	92884	35831 808	
	—		6160	21690	67135	52772	88564 736	
96 70	.99865	68009	05954	96626	60293	24776	558	
	+	4	03858	73332	61932	40111	47267 072	
	—		6160	46602	70714	87853	03278 592	
96 75	.99869	71867	79287	58559	00404	72043	150	
	+	3	97698	26729	91217	52258	43988 480	
	—		6160	71134	73444	54926	83454 464	
96 80	.99873	69566	06017	49776	52663	16032	063	
	+	3	91537	55595	17772	97331	60534 016	
	—		6160	95286	73811	28124	21023 744	
96 85	.99877	61103	61612	67549	49994	76565	690	
	+	3	85376	60308	43961	69207	39510 272	
	—		6161	19058	70325	25751	76180 736	
96 90	.99881	46480	21921	11511	19202	16075	916	
	+	3	79215	41249	73636	43455	63329 536	
	—		6161	42450	61520	10384	67334 144	
96 95	.99885	25695	63170	85147	62657	79405	485	
	+	3	73053	98799	12116	33070	95995 392	
	—		6161	65462	45952	88957	16427 776	

c	Sine						
97 00'	.99888	98749	61969	97263	95728	75401	346
	+	3	66892	33336	66163	44113	79567 616
	—		6161	88094	22204	12851	49680 640
97 05	.99892	65641	95306	63427	39842	54968	427
	+	3	60730	45242	43959	31262	29886 976
	—		6162	10345	88877	77985	53669 632
97 10	.99896	26372	40549	07386	71104	84855	970
	+	3	54568	34896	55081	53276	76217 344
	—		6162	32217	44601	24898	86822 400
97 15	.99899	80940	75445	62468	24381	61073	617
	+	3	48406	02679	10480	28377	89394 944
	—		6162	53708	88025	38837	46277 376
97 20	.99903	29346	78124	72948	52759	50468	112
	+	3	42243	48970	22454	89540	43117 568
	—		6162	74820	17824	49836	90080 256
97 25	.99906	71590	27094	95403	42299	93585	767
	+	3	36080	74150	04630	39703	53037 312
	—		6162	95551	32696	32804	14793 728
97 30	.99910	07671	01245	00033	82003	46622	925
	+	3	29917	78598	71934	06899	38243 584
	—		6163	15902	31362	07597	88413 952
97 35	.99913	37588	79843	71967	88902	84866	418
	+	3	23754	62696	40571	99301	49829 632
	—		6163	35873	12566	39107	38673 664
97 40	.99916	61343	42540	12539	88204	34696	024
	+	3	17591	26823	28005	60194	11155 968
	—		6163	55463	75077	37329	96666 368
97 45	.99919	78934	69363	40545	48398	45852	273
	+	3	11427	71359	52928	22864	14489 600
	—		6163	74674	17686	57446	95839 744

c	Sine						
97 50'	.99922	90362	40722	93473	71262	60341	332
	+	3	05263	96685	35241	65417	18649 856
	—		6163	93504	39208	99898	26293 760
97 55	.99925	95626	37408	28715	36679	78991	894
	+	2	99100	03180	96032	65518	92356 096
	—		6164	11954	38483	10455	44450 048
97 60	.99928	94726	40589	24748	02198	71347	416
	+	2	92935	91226	57549	55063	47906 048
	—		6164	30024	14370	80293	38000 384
97 65	.99931	87662	31815	82297	57262	19254	103
	+	2	86771	61202	43178	74770	09905 664
	—		6164	47713	65757	46060	46240 768
97 70	.99934	74433	93018	25476	32032	29159	286
	+	2	80607	13488	77421	28709	63664 896
	—		6164	65022	91551	89947	35656 960
97 75	.99937	55041	06507	02897	60741	92824	539
	+	2	74442	48465	85869	38762	28007 936
	—		6164	81951	90686	39754	30884 352
97 80	.99940	29483	54972	88766	99504	20832	607
	+	2	68277	66513	95182	99007	97123 584
	—		6164	98500	62116	68957	00946 944
97 85	.99942	97761	21486	83949	98512	17955	330
	+	2	62112	68013	33066	30050	96176 640
	—		6165	14669	04821	96771	00794 880
97 90	.99945	59873	89500	17016	28563	14132	406
	+	2	55947	53344	28244	33279	95381 760
	—		6165	30457	17804	88214	68186 624
97 95	.99948	15821	42844	45260	61843	09513	908
	+	2	49782	22887	10439	45065	27195 136
	—		6165	45865	00091	54170	75824 640

c	Sine							
98 00'	.99950	65603	65731	55700	06908	36709	213	
	+	2	43616	77022	10347	90894	51370 496	
	—		6165	60892	50731	51446	38811 136	
98 05	.99953	09220	42753	66047	97802	88079	442	
	+	2	37451	16129	59616	39448	12559 360	
	—		6165	75539	68797	82831	77384 960	
98 10	.99955	46671	58883	25664	37251	00639	652	
	+	2	31285	40589	90818	56616	35174 400	
	—		6165	89806	53386	97157	34966 272	
98 15	.99957	77956	99473	16482	93867	35813	331	
	+	2	25119	50783	37431	59459	00208 128	
	—		6166	03693	03618	89349	51448 576	
98 20	.99960	03076	50256	53914	53326	36021	952	
	+	2	18953	47090	33812	70109	48759 552	
	—		6166	17199	18637	00484	91814 912	
98 25	.99962	22029	97346	87727	23435	84781	257	
	+	2	12787	29891	15175	69624	56944 640	
	—		6166	30324	97608	17843	29995 264	
98 30	.99964	34817	27238	02902	93060	41725	596	
	+	2	06620	99566	17567	51781	26949 376	
	—		6166	43070	39722	74958	88018 432	
98 35	.99966	41438	26804	20470	44841	68675	332	
	+	2	00454	56495	77844	76822	38930 944	
	—		6166	55435	44194	51670	30437 888	
98 40	.99968	41892	83299	98315	21664	07606	440	
	+	1	94288	01060	33650	25152	08493 056	
	—		6166	67420	10260	74169	14007 040	
98 45	.99970	36180	84360	31965	46816	16099	544	
	+	1	88121	33640	23389	50982	94486 016	
	—		6166	79024	37182	15046	92635 648	

c	Sine							
98 50'	.99972	24302	18000	55354	97799	10585	851	
	+	1	81954	54615	86207	35936	01850 368	
	—		6166	90248	24242	93340	77611 008	
98 55	.99974	06256	72616	41562	33735	12435	772	
	+	1	75787	64367	61964	42595	24239 360	
	—		6167	01091	70750	74577	53051 136	
98 60	.99975	82044	36984	03526	76330	36675	485	
	+	1	69620	63275	91213	68017	71188 224	
	—		6167	11554	76036	70816	46664 704	
98 65	.99977	51665	00259	94740	44348	07863	138	
	+	1	63453	51721	15176	97201	24523 520	
	—		6167	21637	39455	40690	55703 040	
98 70	.99979	15118	51981	09917	41549	32386	389	
	+	1	57286	30083	75721	56510	68820 480	
	—		6167	31339	60384	89446	28224 000	
98 75	.99980	72404	82064	85638	98060	01206	822	
	+	1	51118	98744	15336	67064	40596 480	
	—		6167	40661	38226	68981	99559 168	
98 80	.99982	23523	80809	00975	65124	41803	560	
	+	1	44951	58082	77109	98082	41037 312	
	—		6167	49602	72405	77884	84048 896	
98 85	.99983	68475	38891	78085	63206	82840	947	
	+	1	38784	08480	04704	20197	56988 416	
	—		6167	58163	62370	61466	22025 728	
98 90	.99985	07259	47371	82789	83404	39829	324	
	+	1	32616	50316	42333	58731	34962 688	
	—		6167	66344	07593	11795	82023 680	
98 95	.99986	39875	97688	25123	42135	74792	042	
	+	1	26448	83972	34740	46935	52939 008	
	—		6167	74144	07568	67734	18241 024	

c	Sine							
99 00'	.99987	66324	81660	59863	89071	27731	521	
	+	1	20281	09828	27171	79201	34697	984
	—		6167	81563	61816	14963	83236	096
99 05	.99988	86605	91488	87035	68272	62428	927	
	+	1	14113	28264	65355	64237	51461	888
	—		6167	88602	69877	86018	95863	296
99 10	.99990	00719	19753	52391	32510	13890	898	
	+	1	07945	39661	95477	78218	55598	592
	—		6167	95261	31319	60313	64428	800
99 15	.99991	08664	59415	47869	10728	69489	844	
	+	1	01777	44400	64158	17904	91169	792
	—		6168	01539	45730	64168	65112	064
99 20	.99992	10442	03816	12027	28633	60659	497	
	+		95609	42861	18427	53736	26057	728
	—		6168	07437	12723	70836	75570	176
99 25	.99993	06051	46677	30454	82369	86717	589	
	+		89441	35424	05703	82899	50487	552
	—		6168	12954	31935	00526	63824	384
99 30	.99993	95492	82101	36158	65269	37204	282	
	+		83273	22469	73768	82372	86663	168
	—		6168	18091	03024	20425	32321	280
99 35	.99994	78766	04571	09927	47642	23868	307	
	+		77105	04378	70744	61947	54341	888
	—		6168	22847	25674	44719	17277	184
99 40	.99995	55871	08949	80672	09589	78210	048	
	+		70936	81531	45070	17228	37064	704
	—		6168	27222	99592	34613	43192	064
99 45	.99996	26807	90481	25742	26818	15274	402	
	+		64768	54308	45477	82614	93872	640
	—		6168	31218	24507	98350	32630	272

c	Sine						
99 50'	.99996	91576	44789	71220	09433	09146	945
	+	58600	23090	20969	84264	61242	368
	—	6168	34833	00174	91225	71201	536
99 55	.99997	50176	67879	92189	93697	70389	745
	+	52431	88257	20794	93038	90040	832
	—	6168	38067	26370	15604	27769	856
99 60	.99998	02608	56137	12984	86736	60430	410
	+	46263	50189	94424	77434	62270	976
	—	6168	40921	02894	20933	29889	280
99 65	.99998	48872	06327	07409	64171	22700	807
	+	40095	09268	91530	56501	32381	696
	—	6168	43394	29571	03754	94438	912
99 70	.99998	88967	15595	98940	20672	55083	315
	+	33926	65874	61959	52746	37942	784
	—	6168	45487	06248	07717	13520	640
99 75	.99999	22893	81470	60899	73418	93025	863
	+	27758	20387	55711	45029	24422	144
	—	6168	47199	32796	23582	95512	064
99 80	.99999	50652	01858	16611	18448	17448	428
	+	21589	73188	22915	21446	28910	080
	—	6168	48531	09109	89238	61409	792
99 85	.99999	72241	75046	39526	39894	46358	360
	+	15421	24657	13805	32207	67500	288
	—	6168	49482	35106	89699	96318	720
99 90	.99999	87662	99703	53331	72102	13858	078
	+	9252	75174	78698	42507	71181	568
	—	6168	50053	10728	57117	56221	440
99 95	.99999	96915	74878	32030	14609	85039	930
	+	3084	25121	67969	85390	14960	128
	—	6168	50243	35939	70780	29920	256